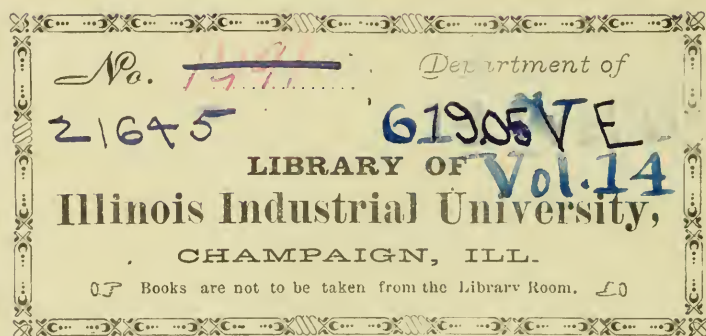




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THE  
VETERINARIAN;

OR,

MONTHLY JOURNAL OF VETERINARY SCIENCE,  
FOR 1841.

VOL. XIV.—VOL. IX. NEW SERIES.

EDITED BY

W. YOUATT,

Veterinary Surgeon to the Zoological Society of London; late Lecturer on Veterinary Medicine  
at University College; and Corresponding Member of l'Accademia de' Lincei, Rome;

ASSISTED BY

PROFESSOR DICK, AND MESSRS. KARKEEK AND PERCIVALL.

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Ars Veterinaria post medicinam secunda est.—*Vegetius.*

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LONDON:

PRINTED BY COMPTON AND RITCHIE, MIDDLE STREET, CLOTH FAIR.

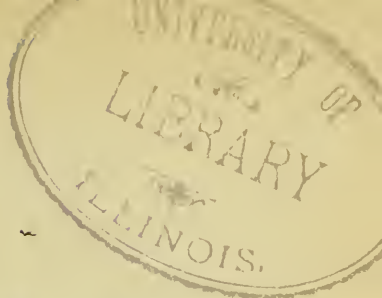
PUBLISHED BY LONGMAN, BROWN, GREEN, AND LONGMANS,

PATERNOSTER ROW.









THE  
VETERINARIAN.

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VOL. XIV, No. 157.]      JANUARY 1841.      [New Series, No. 97.

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ADVICE TO VETERINARY STUDENTS.

*By Mr. G. BAKER, M.R.C.S. & V.S. Reigate.*

—  
Fingit equum tenerâ docilem cervice magister,  
Ire viam quam monstrat eques.

HOR. EPIS. ii, Lib i, 64.

—  
THE commencement of a new year is a period that strikes reflection home to the most unthinking mind. It is, as it were, an isthmus between the mighty continents of the past and the future. The former has been already traversed by all with differing aims, pursuits, and results; the latter is an unknown country, in which the traveller can calculate circumstances only by observation, foresight, and previous experience: but he should so contemplate them in the past as to trust in them for the future, yet so trusting, to determine always to act resolutely upon motives, not of temporary expediency dictated by indolence or caprice, but upon those of prudence, foresight, and moderation.

Not long preceding the new year there commenced another session at our Veterinary College, and with it an accession of young students just crossing the threshold of their professional career. It has often appeared to me, that in very many instances the preliminary education of young men destined to pursue the veterinary profession is so circumscribed in its extent, that the attainment of scientific and general knowledge is not rated at its just value, as affording the firmest foundation on which to rest the professional character of a skilful practitioner. I may, therefore, be allowed to suggest a few hints to those young persons, not with the presumptuous intention of directing them in a technical or scientific practice, but merely to give them sound general ideas, which may render their views more liberal and their minds more generous, or arm them with some useful precautions. I would advise every

pupil who values substantial happiness more than the phantom of it, to devote the first periods of his life to a very serious pursuit of every branch of knowledge which can contribute to give him not only a practical but a theoretical skill in his profession,—not the contracted ideas of a mercenary practitioner, but the comprehensive sentiments of a student in philosophy.

A judicious, liberal, and comprehensive education, is the most valuable heritage a parent can bequeath to his child—far more precious to its possessor than all the wealth of Ormuz or of Ind. The success of an individual in life mainly depends upon it. There are, it is true, many bright and shining names in the page of Biography, who, finding the want of this invaluable endowment, have, in a severe and laborious system of self-culture, roused all their energies to redeem the time that has been lost. But, instead of affording an argument against education, this is the strongest proof of the necessity they felt to acquire that which should enable them to run the race with competitors disciplined by early training to contend for the prize of knowledge. Why, when the means of instruction are multiplying around us, should we lay upon our children the additional burthen of making bricks without straw?

The necessity of keeping pace with the general advance of science and civilization, renders it absolutely imperative upon those students who wish to attain eminence in their profession, to pursue a higher line of mental training than has hitherto been accounted necessary for their advancement. In fact, a liberal education is indispensably essential to enable the student to pursue with success the means of advancement in his profession. Addison has aptly compared a human soul without education to marble in the quarry, which shews none of its inherent beauties until the skill of the polisher fetches out the colours, makes the surface shine, and discovers every ornamental spot and vein that runs through the body of it. Education, in like manner, where it works upon a noble mind, draws out to view every latent virtue and perfection, which without such a help are never able to make their appearance.

By education I understand that system of training the moral, physical, and mental powers, which provides for each its regular and appropriate exercise, and, by an harmonious blending of their various attributes, gradually builds up the character of the individual for the station he is destined hereafter to fill.

This system of training may be commenced much earlier than is often supposed; but it is to be regretted, that it is frequently injudiciously pursued, from the want of skill in maintaining the balance between the activity of the moral, mental, and corporeal faculties. If either is sedulously cultivated to the exclusion of the others, we



may vainly hope for the desired result of our labours,—a sound mind in a sound body.

The infant mind is as a blank page, on which time and circumstances will infallibly transcribe some characters either of good or evil, or of both. It is then “without form and void,” as clay in the hands of the potter; but if, trusting to the future concurrence of time and events to mould into form its primitive chaos, we refuse, says Coleridge, “to prejudice the soil towards bearing the fruits of knowledge, it will spontaneously bring forth the weeds and thistles of ignorance.”

No greater fallacy can possibly exist than the assertion that general knowledge enfeebles its possessor, or renders him less qualified for discharging the active duties of life. There has been some radical defect in the moral or mental training, which is the real cause of this evil. Some indolent habit has been allowed, unchecked; some favorite propensity has never been curbed; the due balance has not been preserved between the moral and intellectual powers. There is no kind of knowledge which, in the hands of the diligent and skilful, will not turn to account. “Honey exudes from all flowers, the bitter not excepted; and the bee knows how to extract it.”

But I must distinctly impress on all the necessity of upholding a sound condition of the moral feelings. Forgetting this, we are raising the arch without the key-stone. Let us be mindful, that the highest state of man consists in his purity as a moral being, and in the habitual culture and full operation of those principles by which he looks forth to other scenes and other times. Cold and contracted indeed is that view of man which regards his understanding alone; and barren is that system, however wide its range, which rests on the mere attainment of truth.

Presuming the moral foundation to be first laid, and without which, I must repeat, we are but “daubing the wall with untempered mortar,” I would strongly urge that young men, before they enter upon their apprenticeships, should be well grounded in the higher branches of arithmetic, general history, and classical attainments; and that they be directed to seize every opportunity of gaining information in natural philosophy, by reading, reflecting, and attending lectures. They will then commence their studies with great advantage, with their faculties expanded and strengthened, and well qualified to apply their powers with greater effect to the acquisition of the various branches of knowledge which are immediately auxiliary to their own profession. Are not natural history, chemistry, botany, and geology serviceable in a profession, the very aim and object of which is to relieve the sufferings of the animal creation? He should seek every opportunity of intercourse

and acquaintance with the writings of such approved authors as bear upon the various branches of his professional pursuits. A good book is the precious life-blood of a master spirit, treasured up for purposes that ennoble the present, and prepare for a future life.

Reading is, indeed, most justly called the food of the mind; but, like food, it must be digested and assimilated. It must shew its nutritive power by promoting growth and strength, and by enabling the mind to bring forth sound and vigorous productions. A due degree of variety will tend greatly to render reading agreeable, and also prevent any weariness; but depend upon this most assured and certain truth, that the degree of profit as well as pleasure will ever be proportioned to the degree of attention. "The studies of literature," says Cicero, in a passage which can never be too often repeated, "afford nourishment to our youth—delight our old age—adorn prosperity—supply a refuge in adversity—are a constant source of pleasure at home—are no impediment when abroad—attend us at the night season, and accompany us in our travels and retirement."

Our talented Professor of Chemistry, in his introductory lecture of 1839, wisely remarks, "The knowledge of a veterinary surgeon is required to be more varied than it is at present, since he is without many of those aids which the medical man receives in the pursuit of his calling. His knowledge, therefore, should be even more extensive than that of the human practitioner; for he is more closely connected with agriculture, with the quality of the soil, and with the character and value of its most valuable productions."

The appointment of Mr. Morton to the professorship of a branch of science so indispensably necessary to the veterinary practitioner must be a great advantage to all desirous of attaining professional eminence; the very best path to which, I sincerely agree with him, is the cultivation of general knowledge; and I trust that I shall soon be able to congratulate the profession generally upon the decided advantage we may confidently hope from the addition of another professor on the diseases of cattle, and perhaps others still on various branches of collateral science; and that those appointments will be on each occasion conferred on men who will strive to arouse the dormant energies of their pupils to the inestimable value of that general knowledge and refinement of mind and manner, of which none better than themselves can fully estimate the benefit.

Let us hope that a new era is now breaking around us, and that the recent appointment, and that which we hope will soon follow, may be the means of diffusing a taste and thirst for further advancement. Our hopes of the increasing usefulness and efficacy of our art will depend much on a more uniform extension of general information through the whole of the profession. One medium of

such communication—and a most important one—is ever before us, through the kind and honest feelings of the Editor of this Journal, whose extensive acquirements in every branch of science should be felt and acknowledged by all. His pages are ever open to the observations of his professional brethren, and their labours, when dictated by feelings of harmony and good fellowship, and with the sole intent of diffusing information and establishing facts, must contribute greatly to the increase of knowledge.

Our own Veterinary Medical Society, which has established a reputation that reflects much honour on its members, and has enrolled on its lists the names of all our most eminent professors and practitioners, must be a most fertile source of imparting instruction to the profession in general; for “knowledge not imparted is but as gold in the mine.” In a science encumbered with so many difficulties, and encompassed by so many sources of error, it is obvious that much caution must be exercised in arriving at any thing like accuracy or truth in our conclusions; and hence the stronger grounds for uniting together, and imparting every useful observation for the elucidation of disease.

The student should first acquire an extensive collection of well-authenticated facts, and trace among them sequences or relations, particularly the relation of cause and effect, and then deduce general facts or general principles. He should strive to ascertain the characters or symptoms of disease, by which disorders are indicated, and distinguished from other diseases which resemble them. He must make careful examinations of the structure and functions of living bodies themselves, as existing in health, as altered by injury and disease, and as influenced by remedies. He must remember that his opportunities of entering upon these researches, and of acquiring a proper knowledge of his profession, are much greater than were those of his predecessors. He must so consider himself wedded to his profession as not to rest satisfied with the mere working out the advantages and discoveries that have resulted from the labours of others; but he must feel himself bound to exert all his own energies in advancing its onward progress. He must consider his profession as a sacred deposit placed in his hands for the benefit and relief of the animal creation.

He will now see the absolute necessity of becoming an excellent anatomist, which can only be acquired by very frequent, careful, and minute dissections. He will find this when his attention will be called by his talented Professor at the College to a diligent cultivation of morbid and comparative anatomy, whereby the localities, the varieties, and the natural effects (whether perceptible during life or after death) of almost all the diseased states of the body will be more accurately ascertained: and, by devoting as much



time as possible to physiology, the immediate causes of the fatal termination of diseases will, in most cases, be explained.

He should make it a point of great interest and importance to study the early history of diseases, their causes and their course. It is a circumstance of the utmost practical importance, to be able to recognize a disease; it being generally one of the questions first asked—"What is the illness of my horse?" The general appearance of the animal, the peculiar modification, the particular combination of the symptoms, give a character to the whole disease, and guide the attentive practitioner in forming an opinion as to its probable result. But it is a fact, well known to all familiar with the treatment of disease, that many disorders (even those the presence of which is commonly indicated by well-marked symptoms) will, in particular cases, present throughout the whole or great part of their course a material deficiency or total absence of their usual external character, and are frequently concealed from observation.

Considering the importance of this subject, in a practical point of view, especially to those just entering upon their professional career, it may be added, that it certainly has not hitherto received that systematic attention to which it has an undoubted claim. In ordinary practice, every observant veterinarian is liable to be taken unawares by the sudden development of the symptoms of diseased action long dormant in the system, and secretly advanced beyond the reach of a remedy. There are many diseases which may exist for a long time, and even advance so far as to cause injury to organs essential to life, without seriously incommoding the animal, and without occasioning death.

This may, perhaps, in some cases excuse the conflicting evidence on veterinary jurisprudence which we receive from many of the leading practitioners in our profession; but we must all deeply deplore the want of some better established principles, as an appeal to that law which shall alone constitute the term "soundness."

Many students, to whose consideration I would recommend these observations, are doubtless destined to pursue their profession in the army; and much depends upon their own acquirements and conduct, whether they are raised to that position to which they are entitled by the commission they hold. Every commissioned officer is regarded as a gentleman, and general information and refinement of mind are the characteristics by which he should be distinguished. Many so circumstanced may be called upon to serve in India, the colonies, or foreign lands; and will it not be of advantage to possess that scientific information which will enable them to reap the benefit of the change, and, at the same, time be fit companions for the society of all who are distinguished by general knowledge. He that speaks only of such subjects as are familiar to himself, treats

the company as the stork did the fox, presenting an entertainment to him in a deep pitcher, out of which no creature could feed but a long-billed fowl.

The modern languages are always useful, and afford many sources of information that would be otherwise unknown. We hope that the olive of peace may long flourish; but should it be succeeded by the laurel, a knowledge of the continental languages becomes almost indispensable to one who is engaged on foreign service.

In conclusion, I would exhort you, gentlemen, to seek every kind of knowledge that tends to the improvement of your moral and intellectual faculties. It is thus you will uphold the dignity and honour of your calling, and reap the harvest of life which only awaits those who can succeed to a certain degree in elevating themselves above ignorance and want. The peculiar utility of your employment, when judiciously and humanely conducted, will insure you public approval. Fear not that variety of knowledge was ever known to encumber its possessor; but when it is combined with the power of observation, a retentive memory, a fixed attention, and a habit of generalizing and combining facts, you will commence your professional studies with every prospect of success: then I do not doubt that, by your industry and perseverance, the knowledge of our art will be so perfected, and our acquaintance with the nature and treatment of diseases so extended, as in many cases to prevent, and in all to relieve to a certain extent, the sufferings of the animal creation.

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## ALBUMINOUS URINE.

*By* W. PERCIVALL, *Esq. V.S. 1st Life Guards, M.R.C.S., &c.*

TO this subject my attention was first drawn in December 1838. An officer's charger, six years old, thoroughbred, who, before he came into the possession of his present owner, had been much used, and had obtained a good character as a hunter, exhibited some rather strange symptoms, respecting which my first impression was that he might have sprained his loins under too heavy weight in the riding-school. With a view of shedding some additional light upon his case, I desired that some of his urine might be caught; and this circumstance it was that at once unravelled the nature of the disease of which he was the subject. This urine proved to be light-coloured, but very thick in its consistence; in fact, it was, when poured into a glass, very much like so much melted calf's-foot jelly. I lost no time in consulting some of our best works on

human medicine on the subject, and soon learned that the case must be one of "serous or albuminous urine," a conclusion in which I became afterwards confirmed by the application to the fluid of the usual tests. Since this I have noticed two other cases.

*The Symptoms* observed in one slight case were, a continual desire in the horse to stretch himself out in his stall, and thus continue with his fore legs extended under the manger, and his hind ones backward, unless disturbed, all day long; not for the purpose of staling, but apparently because that posture seemed an easy or a comfortable one to him. In another case the horse stood in his stall "all of a heap," with his back roached and his hind legs advanced underneath his body. Led out, the animal in his gait evinces stiffness in the back and loins, which is most manifest in turning round. There is some fever attendant; but this, in a slight case, will but amount to a slight heat of mouth and acceleration of pulse, without materially affecting, perhaps, either the spirits or the appetite. In a severe attack, however, there will be rigors, and a great deal of pain, manifested by accelerated respiration and loud blowing or puffing at the nostrils, anxious countenance, and small quick pulse; combined with extreme disinclination to move, and great pain and difficulty in progressing and turning the hind parts. The bowels are commonly confined.

*The state of the urine*, however, must constitute our diagnosis. The groom must seize the earliest opportunity to collect some. Should it prove albuminous, it will assume a deep or dead straw-colour, and be found of the consistence of a thick solution of gum. Submitted to the test of bichloride of mercury, it will yield a copious milky flocculent precipitate, resembling white of egg; and in some cases—not in all—the albumen contained in it will coagulate on exposure of the urine to heat: when this last test fails, I take it the failure is attributable to the large quantity of water with which the albumen is united. Its coagulation, however, may still be effected by adding a little acetic acid, and afterwards some prussiate of potass.

*The adult period of life* seems the time at which we are to look for this disease. My patients were aged six, seven, and eight years.

*Relapse* took place in one instance. The first attack, but slight, happened in April 1839; the second, very severe, occurred in March 1840.

*During cold weather* the disease has appeared. I have had no case in summer.

*Pathology.*—*Dr. Blackall*, many years ago, directed the attention of the medical world to the albuminous condition of the urine in dropsy, regarding it as an indication of inflammation and a guide



to the practice of venesection. But with regard to the same alteration in the urine occurring as a sign of diseased kidneys, it would appear we are indebted to

Dr. Prout, who, in one of his *Gulstonian Lectures\**, thus expresses himself on the subject:—"Albuminous Urine, or that variety termed *chylous* urine, I believe was first distinctly described by myself in my little work on urinary diseases."—The leading properties in this urine are, "that in general it so nearly resembles chyle in all respects, as to be scarcely distinguishable from it; that it occasionally passes on the one hand into blood, and on the other into lithate of ammonia; that the chylous state is generally found to be more marked two or three hours after eating, while in the morning it is sometimes nearly absent; lastly, *that its specific gravity little exceeds, and sometimes does not equal, that of healthy urine*; so that, unless the quantity of urine be inordinate, which is sometimes the case, the drainage from the system does not much exceed that of health; a circumstance accounting in some degree for the little constitutional disturbance generally produced by this affection."

This last statement does not hold good in regard to the horse. Most of the urinè I have seen, during the continuance of the disease, has greatly exceeded in specific gravity healthy urine.

Dr. Prout, from his cases, concludes that the disease occurs equally in males and females; before and after puberty; occasions more or less emaciation; may continue many years, more or less, without affecting the constitution; the appetite being generally good, sometimes inordinate; and there being evidently an inflammatory tendency in the system during its progress, which is benefitted by blood-letting.—In the chronic stages, the Doctor has found the complaint yield, for a time, completely to opium, astringents, and mineral acids; whereas, in other instances, these and all other tried remedies have failed. Sometimes the complaint ceases spontaneously, and occurs again after a long interval (as it did in one of my horses); and when it has once recurred it appears to be very liable to return, particularly after exposure to cold, or any cold producing fever. In general, the Doctor has observed that all stimulating remedies and powerful diuretics and tonics do harm.

Lastly, the Doctor asks, "what is the intimate nature of the disease?" and answers, that, "like that of all others, it is obscure." The Doctor thinks it cannot be doubted "that both the assimilating organs and the kidneys are involved in the affection. The chyle, from some derangement in the process of assimilation, is not raised to the blood-standard, and, consequently, being unfit for the future purposes of the economy, is, agreeably to a law of the economy, ejected through

\* These lectures are re-published in the 4th vol. of *The Veterinarian*.

the kidneys: but these organs, instead of converting it into the lithate of ammonia—permit it to pass unchanged. That this is a first view of the matter, cannot, I think, be doubted; for if the chyle was properly converted into blood, this fluid, and not chyle, ought to be thrown off by the kidneys. On the other hand, it may be stated as an argument in favour of the notion that the kidneys are affected, that chyle has often been found in the blood when the urine was entirely free from albuminous matters; shewing that, in the healthy state of these organs, even though chyle does get into the sanguiferous system, it is not necessarily ejected, or, if it is, that it undergoes the usual changes in passing through the kidneys. This affection of the kidneys, however, like that in diabetes, does not seem to amount to organic disease, at least to such as is cognizable by the senses.

*Dr. Elliotson*, in his *Lectures\**, expresses himself as follows on the subject before us:—"With regard to the albuminous state of the urine, we are indebted to

*Dr. Bright* for the fact, that, in organic disease of the kidney, the urine is generally in this albuminous state; that is to say, contains serum."

ANDRAL, in his "Chemical Reports," had previously mentioned a case where he found the urine albuminous and the kidney in a granulated state. He simply mentioned the fact. He had no more facts, and he came to no general conclusion, nor would he have been justified in doing so. But *Dr. Bright* has collected a large number of cases, and he has found that, when the kidney is in a disorganized state, the urine is generally albuminous. He does not say (so far as I can understand his book), that when the urine is albuminous the kidney *must* be in a state of organic disease; for he says, that sometimes he has seen it only gorged with blood. But still, even here, the kidney was *affected*.

Some have gone further than this, and, I think, without any reason whatever. They would have us believe that nobody can have albuminous urine without organic disease of the kidney. Now I really cannot subscribe to this assertion; and for this reason: I have seen patients who were perfectly well a day or two before, but who have got wet through: symptoms of inflammatory dropsy have come on; the urine has become albuminous; but on bleeding them the dropsy has presently been got the better of, and the urine has recovered its healthy appearance. Why these poor people should be supposed to have had diseased kidneys merely because they had albuminous urine for a week, I cannot imagine. It is a mere assumption, I think. I could not open them, to ascertain whether their kidneys were diseased; but as they are in perfect

\* Edited by *Dr. Rogers*, and published in 1839.

health now, and had been in perfect health just before, and the urine is no longer albuminous, I do not believe there is any more foundation for supposing the existence of organic disease, than there is for supposing that cancer of the stomach is present in every case of temporary dyspepsia, because, when people *die* of dyspepsia, we find more or less organic disease. It is the business of those who make these assertions to prove their correctness; to prove that these persons have organic disease of the kidney, and not our business to disprove it. Because, when a person *dies* making albuminous urine, you always find structural disease of the kidney, it does not follow that, when the urine temporarily presents the same phenomenon, and the person recovers, he has had any thing more than a functional complaint. Because the affection of the kidneys may arrive at such a degree of intensity as to destroy life, and you then always find organic disease, it does not follow that the *temporary* formation of albumen should be any thing more than a functional disturbance of the kidneys. I should draw just the opposite conclusion; and should suppose that, if the symptoms were temporary, the disease must be functional. Dr. Mackintosh informed me that some medical students in Edinburgh had lately ascertained that, when they ate pie-crust, and it produced dyspepsia, their urine became albuminous. They made this experiment over and over again; and the circumstance is nothing more than I should expect\*."

These medical quotations shew us how long and how much the present subject has engaged the attention of some of the most eminent physicians of our own day; at the same time, they appear to demonstrate to us, that albuminous urine may exist without organic disease of kidney—may be the result of simple functional disorder of the gland—may even proceed from indigestion—nay, from disease of liver. All these are facts, however, which we, as veterinarians, must receive *cum grano salis*. We must regard them only as starting-posts from which we may safely set off on our inquiry, and which may prove to be well founded or not on further investigation. We know how little the horse is the subject of dyspepsia; we know how less still his aliment is varied, or of that kind likely to render him so: we have, therefore, stronger grounds than surgeons for believing that this change in the urine is the effect of some altered state, functional or organic, of the kidneys. I would, therefore, still counsel the veterinarian to continue to regard the appearance as an important aid, on occasions,

\* "Dr. Graves, the eminent Professor of the Institute of Medicine in the School of Physic in Ireland, has done much to dissolve the supposed invariable connection between albuminous urine and disease of the kidney. He shews that it often depends on disease of the *liver*." See his valuable papers in the *Dublin Journal of Medical and Chemical Science*.



in directing us to a safe and sound diagnosis;—as, in fact, connected with other collateral evidence, amounting to a proof that the kidneys are the seat of the animal's disease.

*My Treatment*, where symptoms of inflammation have distinctly shewn themselves, either in the form of constitutional irritation or locally, has, in the first instance, been antiphlogistic. I have both bled and purged moderately, and applied upon the loins, in cases of much tenderness and stiffness there, mustard plasters, taking care to sponge them with warm water before they have taken so much effect as to endanger the separation of the hair. So long as any febrile action continues to be manifested, the depletive plan, with attention to diet and abstinence from exercise, will be found most beneficial. Afterwards the best moderator or corrector of the augmented or morbid secretion will be found to be *opium*. I have tried the stimulating diuretics, cantharides, and tincture of muriated iron; but I find they do harm. One circumstance should be mentioned here, and that is, the continuance, from habit, of the stretching out of the legs in the stall after the complaint is removed, which, were it not for the urine, together with the perfect restoration of the horse's action, would induce us to believe the disease remained.

Mr. Clayworth, V.S., Spilsby, has, in *THE VETERINARIAN* for 1836, published a case, respecting which he solicits an opinion, connected, I now believe, with the subject we are considering. It is this:—

In October a bay blood mare, then running in the mail, began to fall off in condition, in consequence of which she was turned into a loose box, where she rapidly regained flesh and spirits. A fortnight afterwards she was taken to exercise previously to being put to her former work. She appeared in perfect health, and very playful. She had proceeded with her rider about half a mile, when she suddenly stopped, began sweating and trembling without any apparent cause, and was with difficulty led home. Mr. C. was sent for—found her sweating and trembling, and scarcely able to turn in the stall; the muscles of her back and loins in a state of spasm; tail quite stiff; kept looking at her flanks, and appeared in violent pain; dropped her hind legs in going forwards; but her loins did not appear tender when pressed upon. (In the rigid, spasmed state in which they were, it is not likely they would.) About a pint of fluid was drawn from her bladder with the catheter, *of the colour and consistence of linseed oil*; after that, the same quantity, thicker and of the colour of porter; and a third portion of the colour of whey. These urines passed in succession, the catheter remaining all the while in the bladder.

That the urine resembling linseed oil was albuminous, there seems little doubt; that the portion resembling porter was mingled

with blood, subsequently and slowly trickling from the kidney, appears probable; but why this should *suddenly* change and become like whey, I must confess I do not pretend to offer an explanation.

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## CONSULTATIONS.

## No. XVII.

## OSTEO-SARCOMA IN A COW.

My dear Sir,—I BEG to request your opinion regarding the disease of a cow, respecting which the owner and myself do not perfectly agree. I will hereafter send you the morbid parts when they are sufficiently macerated. I am, at present, disposed to trace it to some mechanical injury, but none of the servants knew any thing about it: there was no appearance of injury on the muzzle, and she seemed to masticate and ruminate her food as usual. It was a little girl, who, taking the cows to water, first discovered that something was the matter with the animal's mouth, and told her father of it. He, the farm-servant to a gentleman of considerable property, informed his master of the case, and I was sent for.

On examining the cheek externally, there appeared an enlargement of the inferior maxillary bone at its anterior part. I then opened the mouth, and to my surprise found that all the teeth were gone, except the two anterior molars, which were loose, one of which I extracted with my finger and thumb. The palate was detached from the roof of the mouth nearly to the centre of it, and there was a fungus filling up and sprouting above the cavities that had been occupied by the teeth. I removed as much as I could of this fungous growth, by means of a pair of scissors. I was compelled to repeat this operation three or four times, for the fungus grew afresh, filled the animal's mouth, and prevented her from eating.

I directed the mouth to be washed with a solution of alum, but with not the slightest advantage. There appeared to be a large abscess in the masseter muscle, and another a little below the parotid gland. I opened both, and found them to contain a great quantity of foetid pus. A solution of chloride of lime was applied to them frequently, and, twice in the day, the ulcers were dressed with digestive ointment, but without the slightest benefit.

The owner had been absent during the greater part of this time. He now returned, and I immediately told him that I had no hope of the case, and advised that she should be destroyed. He objected to this, and wished to try something of his own. He did so, but without the slightest avail. He would not even then destroy her

but suffered the disease to pursue its ravages; and she lived from the time that I was first desired to attend on her—the 17th of March—to the 12th of June. During this period she was supported by soft food.

The following was the result of the inspection of her after death. The parotid gland on the left side was enlarged to the size of a calf's head, and much indurated. There was a tumour near to the root of the left ear, of the size of a child's head, in the interior of which was a cavity filled with maggots. At the posterior end of the lower jaw there was another large tumour, filled with foetid pus. On laying the mouth open, by cutting away the lower jaw, we found that the large tumour in the cheek opened into the mouth. The orifice was large, and the saliva could flow through it. The tumour consisted of a mass of fungous flesh, which extended half way across the roof of the mouth, and down to the first of the upper teeth, notwithstanding which the animal could take its food, for the rumen was nearly filled when we examined it. The left upper jaw was decayed away and absorbed—the tongue and lower jaw were sound, as was likewise the throat and all the viscera, except the right lobe of the lungs, which was filled with miliary tubercles.

To Professor Dick, Edinburgh.

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ANSWER.

My dear Sir,—The case which you describe is not uncommon in cattle, and is well known to surgeons as attacking the maxillary bones in the human being. It is denominated *Osteo-Sarcoma* of the maxillary bones.

The remote cause seems to be a scrofulous diathesis, and the exciting cause is most commonly disease of the molar teeth, or some accidental injury.

It is most frequent in cattle, but I have seen it in the horse: sheep are also liable to it.

In the human being it has been found that the only certain remedy is the removal of the diseased portion; but I am afraid that this operation cannot be adopted with much chance of ultimate success on our patients.

In the early stages of the disease, the teeth which are connected with it should be abstracted. If an abscess has formed, it should be freely opened, and cleaned out with diluted muriatic acid. The acid may be freely applied to the fungus, or nitric acid may be used for the mouth. I have several specimens of this disease, but the appearances are variable after death, and I should be thankful for any preparation of it.

I am, my dear Sir, your's faithfully,

W. DICK.



## No. XVIII.

## SUPERFŒTATION AND CLYERS.

AWARE of your ardent desire to accumulate useful or peculiar facts connected with veterinary science, I am induced to relate the following occurrence which came under my observation, and with regard to which I was professionally engaged.

On the 15th ult. I was called to a cow, which I found in premature labour. The presentations were preternatural, and, from the contracted state of the passages, I experienced much difficulty in giving the necessary assistance; but at length I overcame every obstacle, and she brought forth *quadruplets*, two of which were living at the time of birth, but soon afterwards expired. There was nothing peculiar in their formation; their parts were developed in their proper proportions, and they appeared to have been in a state of health at the time of their birth. They were carefully weighed; one was  $25\frac{1}{2}$ , another 24, another  $17\frac{3}{4}$ , the last  $17\frac{1}{4}$  lbs.

From the structure of the placenta, I was led to conclude that each foetus was enveloped in a separate membrane, and immersed in a separate fluid. Their births were premature by two months and nine days. The mother is three years and eight months old, of the Angus polled breed, and had a calf in the January of this year. The male parent is of the same breed, and a prize was awarded to him at the last Aberdeen Highland Society show. Perhaps you have seen similar cases, but I never before knew of a cow producing four young ones at a birth.

I beg to relate another case.

A gentleman in this place has had three oxen labouring under similar diseases, and all have died. The first two had no medical treatment, but I had an opportunity of examining them after death. In the lungs and liver was deposited a great quantity of calcareous matter, resembling white freestone. Some of these collections weighed two pounds, others not more than a drachm.

The one that died to-day had been under medical treatment, and among other things, calomel had been given to it. On examination after death, his liver contained but one small deposit of this substance, but his lungs inclosed hundreds of them, some of which were four pounds in weight. The deposits were round or oval in shape, and the lungs very much resembled bags containing sandstones of various sizes.

I have preserved a specimen of them. If they are worthy of your notice, or of any use in your class-room, I will forward them, with a history of the animals, and the symptoms previous to death.

I shall be much obliged if, at a convenient time, you will favour me with your opinion on the subject, and what the treatment ought to be.

I am, dear Sir, with due respect, &c. &c.

To Professor Dick, Edinburgh.

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ANSWER.

Dear Sir,—I have to thank you for the account of the quadruplets. You know I like facts—any person may theorize.

I am sorry that I cannot point out any plan of treatment likely to be successful in the other case which you mention. I shall be obliged by your sending me a specimen of the tumours, with a history of the cases—stating the particular exposure of the farm or the field in which they have grazed during the summer. I should be glad to know all particulars, in order that I may be satisfied whether they correspond with other facts I have learned, and which you seem to have forgotten. From what I know of the country around you, I am much mistaken if you do not find that these cattle have been exposed to the eastern breezes which so much prevail with you, and to which your town is so much exposed.

These hints will, perhaps, remind you of my Lectures on “Clyers” in cattle; but state to me only *the facts*—never mind my theories. When I know the facts, I may be able to advise a preventive, which will be better than a doubtful cure. The disease is phthisis pulmonalis, which, whether in man or animals, is always very hopeless; and it is, therefore, better to recommend some probable means of preventing the disease, than to waste our energies in attempting a hopeless cure.

I am, my dear Sir, your’s very truly,

W. DICK.

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No. XIX.

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WARRANTY.

Sir,—SINCE I last wrote to you, I have had an opportunity of selling the mare concerning which I had informed you that she had occasional nervous attacks. After I saw you she had them twice, but not lasting more than half a minute at either time. I will describe them as minutely as possible.

She is to all appearance in perfect good health; feeds greedily; no purging, or any apparent disease whatever, with the exception

of being rather hide-bound, and a very slight dry eruption on her skin, which has existed more or less since I bought her about a year ago. I might remark, that, perhaps, she does not take on flesh in the degree her feeding would lead us to expect, though, in spite of the slight eruption, her coat is remarkable glossy.

The appearance of the nervous affection is an apparent stiffening of the legs and contraction of the skin, which goes off the moment she stands still; and should it happen at a considerable distance from home, on arriving at the stable she attacks her meat as greedily as ever, and shews no symptoms of any thing having happened.

Having supposed it to proceed from some slight affection of the digestive organs, we gave her a ball of six drachms of aloes, but without any apparent effect, as it has happened since. We have this day given her a ball of two drachms of antimony, three of nitre, and four of sulphur, supposing that her skin may have been affected by cold. Such is the case and treatment. *Under these circumstances, is it your opinion that I can give a warranty of soundness?* You will oblige me by giving me an immediate answer, as on Monday the bargain must be concluded or not.

She is a wonderful trotter, and the nervous affection has happened after trotting fast for a mile or two.

I remain, your's truly.

To Professor Dick, Edinburgh.

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As to your mare's soundness, holding, as I do, that all and every disease, whether it be latent or obvious, constitutes unsoundness, and if even the cause of some future ailment exist at the time of sale the animal must be considered unsound, *I would advise that you should not warrant her.*

There are some apparent reasons for forming an opposite opinion; and I have no doubt many would consider themselves quite entitled in giving a warranty, because the disease, or at least the obvious symptoms, are only occasional and very temporary, and from the mare's nervous temperament, the effects you mention might be referred to that cause combined with over-exertion, although it may only be continued for a short time; but as she is also in some degree "hide-bound, and has an eruption on her skin," I think it must be held that there is some latent cause existing in the system, which only requires excitement to produce its development, and she must, therefore, be held as unsound. Such, I think, would be the opinion of lawyers.

I am, &c.

W. DICK.



## ON THE RATIONALE OF CLIPPING,

By Mr. THOMAS TURNER, V.S., Croydon.

MY object in addressing these few lines, through the medium of your truly useful Journal, is to solicit the earnest attention of the veterinary profession, individually and collectively, towards eliciting the true rationale of that most extraordinary and salutary auxiliary in stable management, denominated "clipping of the horse."

As regards the all-important fact of its efficacy upon the fast-working horse, I shall venture to assume that no schism can exist in the minds of our professional brethren, it being self-evident; but in this scrutinizing age, for the tracing of cause and effect, it would be unbecoming, if not culpable, for a numerous class of scientific men to remain content with the acceptance of the boon, without assiduously applying themselves to the philosophy of the thing—the *modus operandi*. Our well-read employer naturally and anxiously puts the question, expecting a ready answer; but I contend that this is a problem which does not admit of a reply quick, short, and decisive: it must be comprehensive in the broadest sense of the word. I submit that we should first ponder well upon its chief feature, which is instantaneous, viz. its tonic power; and here it may be well in passing to comment on a fact which can never have escaped the observation of one individual *fast* horseman,—that the acknowledged best horse for quick work, whether for the road or field, is never what is called "*up to the mark*" as a *performer*, unless his coat is limited to a certain length, and lies close to his skin. During the months of October and November, an inordinate growth of hair is observed over the whole surface of the body, and in many horses as early as the beginning of September, and which almost invariably prevails more or less in every horse short of being thorough bred. The debilitating effects thereby induced are profuse perspiration on the least possible exertion, depression of animal spirits, with the appetite in many instances so delicate that our professional advice is required to make the mind of the owners of such horses comfortable, by an assurance that illness is not present. A balm indeed this is to them when we can pronounce such a decision, and in proof of our opinion recommend the immediate removal of all the superfluous hair from the body by close clipping, which instantly proves such a tonic to the animal, that I unhesitatingly affirm it is inferior to none at present known in the whole range of our pharmacopœia. The owner is constrained in exstasy to exclaim, "It is truly marvellous! my horse

is now so fresh and above himself, that I can scarcely hold him :” when eight-and-forty hours previously he felt in his own mind persuaded that he was a fit candidate only for an infirmary. Now here is a great mystery, which I think as yet has not been sufficiently explained or accounted for, and therefore I intend humbly to offer a few ideas of my own on this very interesting subject.

All writers, I believe, both ancient and modern, are agreed that the skin of the horse is a gland, and, as such, a most extensive secretory surface. From the skin also arises the hair, each separate hair having its bulb or root, and, according to microscopic observation, being deemed a hollow tube.

I learn from Muller’s human physiology, that “the bulb of the hair in man consists of the soft part of the hair, and the pulp within it. The bulb is club-shaped, and thicker than the rest of the hair. The pulp is gradually lost in the medullary substance of the hair; the substance of the hair is formed by the secretion of horny matter on the surface of the conical vascular pulp.”

Now, just in proportion to the length of these innumerable hair tubes, in that exact ratio does the horse experience distress when perspiration is brought about, either by muscular exertion out of doors or in a stable at a high temperature, under the ordinary weight of clothing; simply owing to the vapour of perspiration becoming condensed by the obstruction offered, not only by its inordinate length, but also an abnormal quantity. By shortening, however, the hairy covering, a vapour only is readily exhaled, to the incalculable comfort of the animal under the most trying exertion, his respiration appearing much less accelerated, and the slight indication of damp on the surface of his body assuming a dry genial warmth in a few minutes, and not unfrequently without the least friction having been used for that object. Of course I am not unmindful of a fact worthy of observation, that hunters not thorough-breds are to be met with in first-rate establishments, where no labour is spared by the really working groom to exhibit them at the covert side with short coats, shewing a highly polished surface, and without the aid of clipping; but how so accomplished? in nine out of every ten instances, the pains-taking and industrious groom has closely watched the earliest growth of hair, then amounting only to down, and has skilfully applied his spirits of wine flame as a preventive to the hair arriving at any length to cause him unnecessary labour. Hence, also, the next best substitute for clipping presents itself, although somewhat tedious, and certainly not so summary a process, and, if unattended to in the early stage of the growth of hair, fails altogether in the object so much sought after. Imagine the sporting Peer, at the meet by the covert side, mounted on his five-hundred-guineas-hunter, for although *clipped* he deigns to ride him; now mark the silent and

not uncourteous *reminder* which the nobleman encounters, that his nag is not the *ne plus ultra* of that day's show, by his less aristocratic neighbour, though wealthy yeoman, stalking stately by upon a hunter of equal value and stoutness, with his *natural* coat blooming like an Arab fresh from the desert, or vieing in splendour with the skin of a Derby winner in the month of May.

This is a triumph in stable management, which the ardent sportsman only can duly appreciate; the *absence* of it in a good stud of hunters harrows up feelings in the mind of the owner scarcely governable, and envy is not the least of them. Now, signal as the success of clipping has been, I do entertain a hope, and am of opinion, that in the majority of instances it may be superseded by singeing, under certain modification.

The very best veterinarians of which our profession can boast have yet much to learn concerning the *sympathy* between the *skin*, the *respiratory organs*, and the *stomach*.

We shall never be able rationally to explain the magic effect of the clipping, especially on the *wind* of the hunter, until we have expended much reflection, and the subject is worthy our efforts. Considering the vast extent of surface of the skin, the inordinate growth of hair must be a considerable expense to the economy of itself, and have a debilitating effect.

I am compelled, through urgent business, abruptly to desert my subject; but I hope to be able to resume it at no very distant day.

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## A CASE OF NEUROTOMY IN A COW.

*By Mr. J. GUTTERIDGE, V.S., Ross.*

PARDON me for not sending you the particulars of the lame cow, concerning which you so kindly favoured me with your opinion. I should have written before, but was anxious to wait some time, in order to see whether the lameness would return; but am proud to inform you of the good result of the operation.

I tried the iodine ointment for some time, but it was of no sort of service. I then prepared the cow for the operation, by bleeding, aperient medicine, and low diet. During this time I availed myself of the opportunity of operating upon a dead ox, and then on another immediately before it was killed. I commenced the operation by cutting the hair from the leg. The cow was cast, and well secured with the hobbles. The diseased leg was then removed from the hobbles and extended, and a tight ligature passed round just below the knee. Then, in the centre of the back of the leg, a little inclining towards the inside, and about two inches and a



half above the fetlock, the artery was recognized by its pulsation. I proceeded to make a cautious incision through the integument, dissected through the cellular substance, and the nerve was brought into view. I passed my crooked needle, armed with silk, underneath it; then gently raised the nerve, dissected it from the cellular substance beneath, and removed one inch of the nerve, my first incision being made at the upper part: in which case the pain of the second cut was not felt. The edges of the wound were then brought together, a small piece of list placed over them, and this was bandaged tolerably tight. I gave a strong purgative, and kept the cow upon bran-mashes, &c.

On the third day the bandage was removed, and the wound dressed with tincture of aloes. The part healed in less than three weeks; but the cow got up immediately after the operation free from lameness, to the great joy, not only of the owner, but every person present; and I need not tell you my own feelings at such complete success.

The milk, which had stopped altogether, returned in a few days; and the cow is now in fine condition.

I called yesterday at the farm to see a sick horse, and the cowman requested me to walk and see her. It is not possible to detect the least lameness, except, perhaps, that she steps a little short with that leg: in all other respects she is perfectly well.

I did not find it so difficult to perform the operation on the cow as on the first horse I neurotized. I trust, from the good success I have met with in this instance, the operation will become general in all similar cases; in fact, in many a lameness for which a valuable animal has been destroyed.

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## ON DRENCHING HORSES AND CATTLE.

*By Mr. W. MOGFORD, Guernsey.*

OPINIONS that I have met with in the course of the discussions which your valuable periodical has given to the public on the subject of the present epidemic among cattle have again brought under my eye the strictures of Professor Stewart, of Glasgow, on *drenching*. I may, if you will permit me, offer you, on a future occasion, some remarks on this said epidemic; but I will at present confine myself to the point in question.

The most circumscribed practice will supply complete proof of the importance of the subject, although by some it may be treated as too trivial to call for serious discussion. Mr. Simonds is of opinion, and I coincide with him, that some of the ingredients of the

drench are sometimes to be found in the trachea. It must then present an obstruction calculated to produce formidable, if not always fatal, consequences. This I have found to be the case in cows, especially where the spinal marrow has been affected. It will happen even when the drench has been administered with the greatest care; a fact which would ever make me protest against making the unsuccessful operator responsible in law for his failure. If made responsible for the result of unsuccessful drenching, why not for that of balling? Who does not know that, with all that science and experience can suggest, death will sometimes ensue from the administration of a ball, and in such a manner as the most minute inquiry previous to death could not elucidate, and which a post mortem examination will prove to have been attributable to malformation, previous improper treatment or trickery, or other circumstances beyond the professional attendant's controul? Who can doubt it after reading the apparently intricate case described in so masterly a manner by M. Renault in *THE VETERINARIAN* of October, 1839?

I remember being called upon, with Mr. White, as far back as 1807, to see a horse belonging to the Duke of Sussex, then in Devonshire, and which died before our arrival. At the request of his Royal Highness the horse was opened, and we found all the organs in a perfectly healthy state. We were lost in astonishment until I discovered a ball wrapped in paper lodged in the œsophagus, which accounted for the death of the animal, without necessarily fixing a stigma on the individual who had administered the ball.

I might adduce cases many of which would go far to prove that hereditary defects in the animal could sometimes readily account for effects of this class, otherwise altogether mysterious. To be candid, I speak feelingly on the subject, being at this moment, though after a considerable lapse of time, subjected to the unmerited censure of a gentleman of this island, the death of whose mare was, through misrepresentation, attributed to the manner in which I gave her a ball; but the post-mortem examination of which proved, beyond all contradiction, that death ensued from causes perfectly independent of any act or treatment of mine.

To return to the question. It must nevertheless be admitted, that, too frequently, failure must be attributed to a want of attention and expertness. I have lately been called to three valuable dogs, all beyond recovery, and victims of an improper mode of drenching.

Due regard must certainly be had to the kind of instrument used in the act. The common use of the horn will go far to account for the consequences which Professor Stewart is anxious to avert. The introduction of the large end into the animal's mouth necessarily demands that expansion which incapacitates him from swallowing,



and is, in nine cases out of ten, the cause of all the mischief. It is, I consider, on this principle that the Professor recommends a bottle as a substitute. I have found it convenient on various occasions, especially when administering the gripe tincture.

When the animal is down, by placing the knee on the neck, and gently raising up the mouth, it may thus be easily poured down without spilling one drop, assuming that the individual is a powerful man; if not, he will, of course, require an assistant. And yet, where we have to contend with a vicious temper or great restlessness, the brittleness of the bottle would, I imagine, often render it a dangerous process.

On the whole, I should much prefer the *small end* of the common horn. It would, perhaps, be difficult to select an instrument more generally adapted than the Light Company Rifle's powder horn.

I am aware that when a large quantum of liquid is required, for instance, in a stoppage of the bowels or gorged stomach, it could not answer the purpose. In such cases I suppose we should all agree that nothing can compete with Read's admirable stomach pump.

As may be gathered from these few observations, experience has taught me to attach much importance to the position of the head. Common sense must teach us that the undue elevation of head, which is so often resorted to, will incapacitate the organs for those functions on the free exercise of which success in the attempt must evidently depend. Let any one make the trial on himself. Let him raise his head as high as possible, and he will find the act of swallowing difficult, *and, with the mouth wide open, altogether impracticable.*

With a little presence of mind, and humouring the animal, and if we watch our opportunity and use promptitude, I think a systematic adherence to these practical suggestions would make the cases of failure of very rare occurrence. I have had some difficult, and even rather dangerous encounters; but I have not yet met with a defeat.

Perhaps my little reputation for drenching and balling, particularly when living in Exeter, may make me somewhat too self-confident; but, deprecating all arrogance, as I do, I think, had my friend the late Mr. White been alive, he would have encouraged me, had I been a nearer neighbour of Professor Stewart, to have accepted his bet of fifty pounds, to drench either of the horses he mentions without twitching and without any assistance.

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## ON FUNGUS HÆMATODES.

*By Mr. J. D HARRISON, V.S., Southport.*

AMONG the catalogue of diseases to which human nature is liable, we find very few which present such remarkable features, and which are generally so unmanageable or so apt to be confounded with other maladies that, in common with it, possess at their commencement certain peculiarities nearly approximating, but which are at the same time sufficiently diagnostic of its true character to the practised eye, as the one which I am about to endeavour to elucidate. If, in so doing, truth compels me in one case to confess my ignorance of the true character of the disease and my total inability of affording relief in another case, the recital of such failures may be beneficial, when, by exciting the attention of the profession, and leading them to a more minute and careful examination of tumours than has been generally practised, the disease becomes recognized and better known among us, and its diagnosis more firmly established. We should then be able, by our prognosis in future cases, to establish our characters as men of science, and by operating in a skilful manner rescue many poor animals from the effects of this malignant complaint, and thus escape that compunction which any man not destitute of the common feelings of humanity must experience when to his ignorance the premature death of a valuable animal is attributable. As a beacon, therefore, to others, the two following cases of fungus hæmatodes are exhibited to the profession.

CASE I.—In the latter end of February 1835, a bay horse, aged four years, was brought to me, having a tumour on the anterior part of the left or near shoulder, about the size of a goose-egg. He had also another, considerably less, in the immediate neighbourhood of the sheath; but as it did not cause the least inconvenience, its removal was not proposed. That which was situated on the shoulder was a great bar to the animal's performance of his accustomed work, the collar when on him pressing on the tumour and preventing his drawing with his usual vigour, which made his owner anxious that it should be removed. Upon examining it, I found it hard, moveable, and no sensibility expressed from pressure, and I therefore concluded that it was only an encysted tumour. The operation was simple, and consisted in making a perpendicular incision over the tumour, and without difficulty separating it from its attachments with the finger, when it slipped out of its cyst as an acorn from its cup. The edges of the wound were kept clean, and occasionally dressed with the solutio cupri sulph., and in eight or nine days was perfectly healed, and the horse at work.

Upon cutting into the tumour after its abscision, it presented a solid body of red and white interspersed, which gave it a striated appearance, not very unlike the arbor vitæ of the cerebellum.

On the 29th of August in the same year, he was again brought to me; the tumour in the neighbourhood of the sheath having almost imperceptibly grown as large as a cocoa-nut, and become very painful, so much so that the animal would not allow it to be touched. It made him kick tremendously whenever they were cleaning him.

To cure him of that vice, which the owner was afraid of his contracting, its removal was decided upon; and, accordingly, that day week, on the 5th of October, I cast him, and found the tumour correspondent in all things (except being highly sensible) with that which was taken from the shoulder; and being perfectly ignorant as to the true nature of the tumour, it was removed in an exactly similar manner.

Fearless of consequences, I did not see him again until the 19th. Instead of the wound having healed as kindly as it had done after the first operation, my astonishment may be faintly imagined but cannot be expressed, when on a cursory glance I found a tumour in the same situation, but four or five times the size of the original one. Upon a closer inspection I discovered it to be the cyst, with its edges everted, its fundus protruding downwards; and I cannot convey to you or your readers a more perfect resemblance of what it presented than by comparing it to an inverted uterus, which most of us have seen. The discharge from the wound was of a bloody serous nature; very great, and highly offensive.

A solution of the chloride of lime was applied to it frequently during the day, but he died on the 22d. I very much regret that I had not an opportunity of seeing him after death. I must not omit to state, that the tumour in the neighbourhood of the sheath existed at a year old, at which time it was noticed by the person who castrated him; but its size then did not exceed that of a pigeon's-egg.

## THE GEOLOGICAL HISTORY OF THE HORSE.

*By Mr. W. C. KARKEEK, V.S., Truro.*

To trace the history of remote events, and to investigate the origin of our domesticated animals, has given occupation to the highest talents; and in this interesting inquiry, mouldering records, decaying monuments, fabulous legends, and the sibylline leaves of tradition, have yielded their respective tributes. But still the details, even of probable history, carry us back but a little way



into the dark recesses of antiquity, and we soon reach the epoch when truth and fable are inseparably blended.

The natural historian and natural theologian have hitherto exclusively confined their attention to one volume of Nature's history,—that which relates to the present order of things; and man is regarded by them as the undisputed sovereign of the world around him—the cattle on a thousand hills are supposed to be at his disposal—the mighty deep yields its treasures to his skill—the savage denizens of the mountain and the forest are tributary to his power, and the *magna charta* for these vested rights they find in the inspired page. From the command to subdue the earth, and to exercise dominion over its tenants, they draw the inference, that their only purpose was to increase his luxuries, and that they were created for no other use, than that they might be subservient to his destructive propensities.

These views of the uses of the animal world, so long universally received, have been of late singularly modified by the light of modern science; for within the bowels of the earth the geologist has discovered a series of engravings, more or less injured and imperfect, yet all executed by the same hand, and bearing the manifest impress of the same mighty mind, which distinctly inform us of the characters and habits of races, some of them extinct and some still existing, which occupied its surface for many thousands of years ere man ever placed his foot on this wondrous soil, or contended with them for dominion.

To trace, then, the ancient history of the horse and his contemporary congeners, we must first take a slight glance at those engravings which have been discovered in the different strata of the earth, and which, like the brain of Touchstone, “is crammed with observation, the which it vents in mangled forms.”

Without embarrassing ourselves with the history of the geological epochs, we will briefly advert to a few facts,—that certain families of organic remains are found pervading strata of every age, under nearly the same generic form which they present amongst existing organizations. Again, that other families, both of animals and vegetables, are limited to particular formations, there being certain points where entire groups ceased to exist, and were replaced by others of a different character. It is also a fact well to be acquainted with, that animals and vegetables of the lower classes prevailed chiefly at the commencement of organic life, and that the more perfect animals became more gradually abundant as the world grew older.

If we pass in succession from the ancient to the modern epoch—from the regions of sterility and desolation to that in which animal and vegetable life were profusely developed, we find that the first



evidence of organic existence was, setting aside the infusoria, a few *fuci*, *mollusca*, and *polyparia*: these were followed by a large development of the same order. In the succeeding period, reptiles and insects appear, with sauroid fishes, and an immense development of vegetable life, particularly the cryptogamia class, such as mosses, ferns, &c. Large reptiles did not then prevail to an extraordinary degree at this epoch in what are now the temperate regions of southern England—the weald of Sussex and Dorsetshire for example; but a very long time afterwards these spots were peopled by monsters of an extraordinary character, which stalked amid marshy forests of a luxuriant tropical vegetation, or floated on the genial waters. This state continued for a long period of time, when another change took place, and the country and its inhabitants were swept away. An ocean had usurped its place; and then, after another long period of time, and the dry land had again appeared, it became covered with groves of forests, and herds of deer, and of oxen of enormous size. Groups of elephants, mastodons, horses, and other herbivorous animals, occupied its plains; its rivers and marshes were crowded with the hippopotamus, the tapir, and rhinoceros; and its forests afforded shelter to the hyæna, the bear, and the tiger.

This is the period when the horse first appeared on the stage of life, being the one subsequent to the last grand catastrophe, as it is frequently but incorrectly called, by which the earth was said to be overwhelmed,

“ Ere Adam was, or Eve the apple ate.”

We must now confine ourselves more closely to this particular period, being the one immediately antecedent to the present order of things.

In almost every part of the globe, beneath the present or modern alluvial soil (which is a loose strata constantly deposited by streams and rivers), extensive beds of gravel, clay, and loam are found, spread over the plains, or in the flanks of the mountain chain, or in the crests of ranges of low elevation: and in these accumulations of water-worn materials—termed by Dr. Buckland, *diluvium*, and by Cuvier, *alluvium*—are immense quantities of the bones of large mammalia. These remains belong principally to the mastodon and the elephant, to various species of hippopotamus and rhinoceros, to the horse, ox, deer, and many extinct genera; while in caverns and fissures of rocks, filled with calcareous breccia, the skeletons of tigers, boars, gigantic hyænas, and other carnivorous animals, are imbedded. They have been found alike in the tropical plains of India, and in the frozen regions of Siberia, while there is no considerable district of Great Britain in which some traces of them do not occur. These remains are not always found together. Cuvier,

whose authority I quote, says, that the *remains of the horse* have been found with the mastodon (an extinct animal allied to the elephant) in America; with the mastodon in Little Tartary, Siberia, Italy, and France; with the rhinoceros in France, Italy, and Germany; and with the rhinoceros, hippopotamus, hyæna, tiger, elephant, and a gigantic species of cervus, in Great Britain. Capt. W. S. Webb discovered the remains of the horse in a fossil state, together with those of the deer and bear, in Diluvium, and on the Himalayan mountains, at an elevation of 16,000 feet.

In South America the bones of horses of a large size have been discovered by Mr. Charles Darwin, naturalist to the *Beagle*, in company with the remains of the megatherium, of immense bulk; a huge mastodon, parts of rodents, and a llama fully as large as the camel.

“With regard to North America,” Cuvier says, “the *elephas primigenus* has left thousands of its carcasses from Spain to the shores of Siberia.” The fossil ox, in a like manner, he writes, is buried “dans toute la partie boréale des deux continents, puisque on en a d’Allemagne, d’Italie, de Prussie, de la Siberia occidentale et orientale, et de l’Amérique.” “I may here add,” says Darwin, “that horses’ bones, mingled with those of the mastodon, have several times been transmitted for sale from North America to England; but it has always been imagined, from the simple fact of their being horses’ bones, that they had been accidentally mingled with the fossils. Among the remains brought home by Captain Beechey from the west coast of the same continent, in the frozen region of 66° north, Dr. Buckland has described the astragalus, metacarpus, and metatarsus of the horse, which were associated with the remains of the *elephas primigenus*, and of the fossil ox. In Mr. Saull’s geological museum, Aldersgate Street, London, there are three coffin bones, one os sacrum, and one cannon bone, from Big Bone Lock, Kentucky. In the same collection are one cervical vertebra, Herne Bay, Kent; several metatarsal, ditto, one dentata, ditto, and portions of two ribs, from Plumstead, Kent; several teeth from Banwell Cave, Somersetshire; and two teeth, and several astragalus, from Swansea, South Wales, all of the horse. With respect to Great Britain, as I before stated, there is no considerable district in which some traces of the fossil horse do not occur, in company with either those of the elephant, the rhinoceros, hippopotamus, tiger, ox, deer, or hyæna. At Oreston, near Plymouth, an immense number of bones of the rhinoceros and horse were found; and in a cave at Paveland, in Glamorganshire, those of the elephant, rhinoceros, horse, hog, bear, and hyæna were found embedded together. In the celebrated Kirkdale Cave, Yorkshire, the contents of which have been so graphically described by



Dr. Buckland, were discovered fossil bones of the tiger, bear, wolf, fox, weasel, elephant, rhinoceros, hippopotamus, horse, ox, and deer, and an immense number of the bones of the hyæna.

In the earlier ages, some of those colossal bones were supposed to belong to gigantic races of mankind, and hence the traditions of giants, possessed by every country in Europe; but it is an authenticated fact, acknowledged by all geologists, that no traces of man or his works have ever been discovered in any of the diluvium strata. Leibnitz, in his "Protogea," mentions the fossil bones of a unicorn, discovered at Quedlimbourg, in 1663. They were found in a calcareous and gypseous hill, and after being collected, a sketch was made of the animal, such as it was pretended to be: but a single glance at the sketch is sufficient to shew that it was done by very ignorant hands, and taken after parts most incongruously joined. The bones of the horse seemed to have formed the principal part of the conformation, with a considerable portion of the muzzle, a piece of the humerus, a lower tooth, and an ungual phalanx of the rhinoceros. It was supposed by Cuvier, but now denied by most of our eminent geologists, that the diluvium strata on which the animals we have described have been found embedded, was the consequence of a sudden inundation of water. It will be necessary briefly to allude to a few important facts connected with this subject, that are acknowledged by all parties:—First, that after all the strata which compose the crust of our globe had been formed, a great portion of the earth has been covered with water. Secondly, that the period or epoch which relates to this history was one of immense time, and that the whole surface was densely peopled by various orders of living creatures, some of them, as we have seen, not distinguishable from existing species. Thirdly, that great and considerable changes must have taken place since that epoch in the climate of different parts of the world; and, confining our attention to our own island for an example of this, we find that there then flourished on its surface the luxurious vegetation of a tropical clime. In the course of time, however, the whole scene vanished, with various orders of living creatures, then ranging the plain or swimming the lake, such as the tiger, the elephant, the rhinoceros, and the hippopotamus; while their contemporary congeners, as the horse, deer, ox, &c. were left behind. Shortly after this man appears on its surface.

When we carry our minds back to this subtertiary period—which, geologically speaking, is so recent that it may be considered as only just gone by—we receive the accounts with surprise and almost incredulity. It must be admitted, that they at first seem much more like the dreams of fiction and romance than the sober results of calm and deliberate investigation; but to



those who will examine the evidence of facts, upon which the conclusions rest, there can remain no more reasonable doubt of the truth of what I have been relating than is felt by the antiquary who, finding the catacombs of Egypt stored with the mummies of men, apes, and crocodiles, concludes them to be the remains of mammalia and reptiles that have formed part of an ancient population on the banks of the Nile.

Now, if it was a sudden catastrophe or deluge which destroyed the hippotamus, the tiger, and the elephant, how did the ox, deer, and horse continue to escape the flood of waters? Why this partial selection of its victims among the ancient inhabitants of our country? But these changes on our island are not more wonderful than the mutations that have occurred in other parts of the world. It is almost impossible to reflect without the deepest astonishment on the changes that have taken place on the continent of South America. Formerly it must have swarmed with great monsters, like the southern parts of Africa; but we now find only the tapir, guanaco, armadillo, and capybara—mere pigmies compared to the antecedent races. The greatest number, if not all, lived at the epoch we have been describing, and many of them were contemporaries of the existing mollusca.

“In the Pampas,” says Darwin, “the great sepulchre of such remains, there are no signs of violence, but, on the contrary, of the most quiet and scarcely-sensible changes.” “What shall we say,” he continues, “of the death of the now fossil horse? Did those plains fail in pasture, which afterwards were overrun by thousands and tens of thousands of the successors of the fresh stock introduced with the Spanish colonist?” “One is tempted,” he continues, “to believe in such simple relations as variations of climate and food, or introduction of enemies, or the increased number of other species, as the cause of the succession of races. But it may be asked, whether it is probable that any such cause could have been in action during the same epoch over the whole northern hemisphere, so as to destroy the *elephas primogenus* on the shores of Spain, on the plains of Siberia, and in Northern America; and, in like manner, the *bos urus*, over a range of scarcely less extent? Did such changes put a period to the life of the *mastodon augustidens* and of the horse, both in Europe and on the eastern slope of the Cordillera in southern America? If they did, they must have been changes common to the whole world; such as a gradual refrigeration, whether from modification of physical geography, or from central cooling. But in this assumption we have to struggle with the difficulty that these supposed changes, although scarcely sufficient to affect molluscos animals either in Europe or South America, yet destroyed many quadrupeds in regions now characterised

by frigid, temperate, and warm climates." The *elephas primogenus* is thus circumstanced, having been found in Yorkshire; and now associated (says Lyall) with recent shells in Siberia and in the warm regions of lat. 31°, in North America.

The law of the succession of types, although subject to some remarkable exceptions, must possess the highest interest to every philosophical naturalist. Some of the animals we have been describing appear to have been created with peculiar kinds of organization, suited to particular areas; and it does not seem extraordinary that their extinction, more than their creation, should exclusively depend on the nature (altered by physical changes) of their country. But as to the horse, for instance, his constitution appears suited to every climate; and we cannot account for their species being destroyed throughout the whole of the two continents of America, unless the change was much more considerable than we imagine it to have been.

It would seem from what has been stated, that certain races of living beings and plants, suitable to peculiar conditions of the earth, were created, and when those states became no longer favourable for the continuance of such type or organization, according to the natural laws by which the conditions of their races were determined, they disappeared, and were succeeded by new forms.

The reader will observe in the geological mutations we have briefly alluded to, that one simple inundation, one general catastrophe, is not sufficient to account for the phenomena we have described, since many alternate changes of heat and cold must have taken place to have produced these alterations on the earth's surface.

Mr. W. D. Saull, F.G.S., is the only writer who has accounted for those changes in a satisfactory manner. This gentleman confines himself principally to the strata of England, in his illustrations; but it will be seen, that they easily solve all the difficulties that Darwin alludes to respecting these changes in the American continents.

[To be continued.]

## ON THE CONDITION OF THE HORSE—ITS CONNEXION WITH THE COAT—THE BEST MEANS OF PROMOTING HIS CONDITION—CLIPPING AND SINGEING.

By NIMROD.

Dear Sir,—FASTIDIOUS must be the reader interesting himself in the welfare of horses, who is not amused and instructed by Mr. Gabriel's paper, in your last October Number, on the treatment of the horse in the autumn. Seeing that it has reference to my sys-

tem of summering the hunter, and its effects, I have been anxious to offer some remarks on a few of its leading points, but which other calls on my time have hitherto prevented my doing.

That Providence seems to have advanced to the utmost verge of possibility in the gift of life conferred upon animated beings, is obvious to every person who looks at all into nature ; also that, in her general laws, the means of preserving life are provided for, must be equally apparent ; and moreover, that, almost above all living things, the *horse* would not be overlooked. Thus, as Mr. Gabriel observes (after instancing the differences in the quantity and quality of the natural clothing of sheep, swine, cattle or horses, in cold and warm climates), when the thermometer is ranging from sixty to eighty degrees, we find the horse with a thin, smooth, and glossy coat ; on the contrary, when the mercury has fallen beneath zero, with a thick, rough, and coarse one : so long and shaggy, indeed, as to be destructive of all form and symmetry. The chief aim of Mr. Gabriel, then, is, to account for and remedy the effects of these changes—that from the smooth to the rough coat, especially—on the constitution and physical powers of the domesticated horse ; which he has done with great ability, and a thorough knowledge of the nature of the animal in question.

I am quite ready to admit the deteriorating effects of the changes here alluded to on the domesticated horse, and insisted upon by Mr. Gabriel in the case of his own hackney ; but I am also ready to prove, or at all events assert, that they are to be completely obviated by grooming ; and to express my belief that, could it be proved, a race-horse, properly trained, comes equally fit to the post on the first day of October as he could, by the same means, have been made at any other period of the year, when Nature is *not* at work in effecting the change we are alluding to. As to the hacks we ride in common, and all the year round, kept in what are termed hack stables—perhaps one or two in a stable that might hold four, to say nothing of their hanging about when we make our calls, &c.—nothing will prevent their coats from breaking and becoming rough when the cold weather sets in ; but, in the studs of sportsmen, the hacks will generally be found in equal condition with the hunters. And why should it be otherwise ? Take the Melton men's hacks for example. Those ridden in the winter are regularly physicked at the end of the season, and summered with the hunters ; whereas those ridden in the summer are rested all winter, but well physicked when they are again taken into work. The fact is, the only preventives of broken coats and deteriorated constitutions, at *all* periods of the year, are, plenty of aloes and other alteratives, and *warmth* ;—a July stable, if I may so express myself, all the year round. As for myself, I can honestly say, I never felt any prostration of strength in the month of October beyond that in



any other month in the year, with such horses as I had summered myself; and, no doubt, many of your readers will recollect the several proofs I adduced of this fact. "But you are such a devil of a fellow for physic," said my neighbour, the late Mr. Chute, master of the Vine hounds, invariably to me, whilst pointing out to him his horses sweating, even to lather, when trotting to cover in October; whereas mine were as dry as when they crossed the threshold of their stable. But *physic!* *physic*, my dear sir! must horses have if perfect condition is our object, together with dry food eleven months in the year, and a July stable. Nothing else will do it; nothing else has ever done it: and until within the last dozen years not one hunter in twenty has been seen in condition until long after Christmas. What said Lord Gardner, within my hearing, last March, by a cover side in Leicestershire?—"Musgrave's horses," said he, "are *at last* getting into condition!" (Alluding to those of that fine sportsman, Sir James Musgrave, who summers his horses in his park). Those of his lordship, perhaps the hardest rider in England, are never out of their stalls, and but little reduced in their feeds of good old oats and beans. My good sir, nothing else will do it to perfection; and to horses so kept, October or March is equal, as to affecting their constitutions and deteriorating their physical powers. They are, in fact, superior to all such influences as the exchanging old hairs for new ones. And is not such the case—*mutatis mutandis*—with the human race? Why were the deaths of the French in the cholera one hundred to six, in proportion to those of the English, in the parish in which I now live? Merely because they were unable, by the washy nature of their food, equally to resist the disease.

It is impossible to have horses in what is called "tip-top condition" all the year round. The race horse, the hunter, and the hack, must have rest, or each will become stale, and consequently, when called upon, will one day or another fail, and very unexpectedly so. How often has it happened to me to find a sudden change of this sort—to find the horse I was riding sweating when he ought to have been cold; dull and languid in his action, when he ought to have been fresh, and with damp and cold ears. What causes this? Nature operating on his constitution? Nothing of the sort; *art* has caused the mischief. The bow has been drawn too tight, and continued so too long! In other words, he is become stale, and requires to be let down in his condition, which a dose or two of mild physic will effect. In fact, to ensure condition, it is my fixed opinion, that no horse, highly fed and severely worked, should be more than two months without a dose of mild physic. There is, at all events, no calculating on his services without it.

I rejoice to find Mr. Gabriel as strenuous an advocate for warmth,

as an agent in promoting condition, as I myself have ever been, even to the preference of an ill-ventilated warm stable to a cold one. Had we not before us, in addition to experience, the convincing arguments in its favour of writers such as Mr. Percivall, and others of your profession, the horses of the desert might be produced in proof. Independently of the firmness of their bones and sinews—the effect of the warm climate, and the arid soil of the country in which they are bred—there is a kindly feel, a glossy appearance in their coats, which even a cool stable, in a climate so much colder than their own, as an English one must be, but little affects. I have seen several Arabians in large loose boxes in London, and other places, in the winter months, but never saw one whose coat was much disturbed, still less long and staring, as that of low-bred horses become from the effect of cold. And we find, even with our English horses of inferior breed, their coats will be silky, close, and fine, provided they have *always* been subject to a high degree of warmth in their stables when at work, and well fed likewise.

With respect to the coats of horses, I am not going to assert that a long and shaggy one may not be productive of warmth; but this I will say,—that which looks silky and fine to the eye, as in the case of a horse in high condition, is a better safeguard against cold than that which is long and *staring*, and on a dry skin, the effect of poor keep in a poor stable; and if such were not the case, post-horses and gentlemen's coach horses, which hang about doors for hours in all sorts of weather, would not stand such treatment with impunity. And one more word upon coats. There are, and have been, horses (Parasol, the famous racer, for one) whose coats will always be long, under any treatment; but this is no bar to condition, as I have myself proved, having possessed two hunters subject to this peculiarity. Under proper treatment, they dried, after sweating, equally quickly with others whose coats were shorter.

I rejoice to find that, touching alteratives and tonics, as promoters of the condition of horses, I am backed in my commendation of them by such good authority as Mr. Gabriel's, and there the judicious combination is every day becoming better understood than it was in old times, when farriers and science were nearly strangers to each other. And I am also glad to find him a friend to the timely application of the properly composed cordial ball, the good effects of which I have so often experienced. It is in the abuse of them alone that any mischief may arise from cordials, and in that case to a serious extent, inasmuch as the late Earl Courteney's father had two sets of coach-horses destroyed by them.

On the subject of clipping, I cannot agree with Mr. Gabriel as to the call for it, still less admit its "almost universal adoption." I would clip road coach horses, and a hunter that had been summered

entirely at grass, despairing of condition on any other terms. I persist in considering it a mere substitute for good grooming ; and as for its “ almost universal adoption ”—to use Mr. Gabriel’s words—such is far from being the case. I did not see three clipped horses last year at Melton ; in the Quorn stables, not one ; ditto, Mr. Foljambe’s. Singed ones I did see, to a certain extent ; but a hard-riding Meltonian told me he would have no more spirits of wine charged in his groom’s book—“ a mere substitute, in *my* stable,” said he, “ for the old-fashioned elbow-grease.” In my opinion, the horse is not yet foaled which cannot be got into perfect condition without this outrage on nature—which clipping must be allowed to be—and a long coat is no bar to it.

I now take my leave, with this simple remark. “ I wish,” said a celebrated sportsman to me, knowing that I occasionally contribute to your pages, “ you would induce the veterinary profession to turn their attention as much as possible to the *living* as they do to the *dead* horse. The latter,” added he, “ they have pulled to pieces so effectually as to know and describe every bone, muscle, joint, nerve, sinew, and fibre in his carcass, and great is the value of their research ; but they might tell us a little more of the living one.” I found the object of my friend’s remark was to express a wish that veterinary surgeons, in hunting countries, would enter more than they do into the condition of the studs they are in the habit of visiting, and give the result of their observation to the public, as well as a few hints to the owners of them. “ My own stables,” added he, “ are weekly visited by a first-rate veterinary surgeon ; but I could never learn that any suggestions have been offered by him to my groom, who would listen to them, as to the state of any horse to whose particular case his attention had not been directed ; and there must always be appearances in some of a large stud which, if not indicative of disease, could not fail attracting the eye of a practised observer of the slight boundary which so frequently exists between disease and health.”

Your’s, very truly,  
NIMROD.

St. Pierre,  
Dec. 17, 1840.

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## ON THE ABUSES AT THE ENGLISH VETERINARY COLLEGE.

*By Mr. W. A. CARTWRIGHT, Whitchurch, Salop.*

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“The Veterinary College is one of the most rotten establishments in England.”—*Farrier and Naturalist*.

“The Veterinary College is an Augean stable, and it shall not be our fault if we do not clean it out.”—*Lancet*.

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I THINK the time is quite arrived for every member of the veterinary profession to come boldly forward and assist its onward progress in every way, and, if possible, to purify it even at its source; “for if the fountain is impure, its streams necessarily must be so.”

It is now nearly twenty years since I first launched into that sea of anxiety and trouble where, too often, “a beggar’s harvest gained by nightly toils” is only obtained. During that time I have not been a careless spectator of passing events, both in my own practice, in the writings of others, and latterly at the Veterinary College. Thus qualified, I consider myself competent to give an opinion on the state of matters at the College, and to point out what I deem would be advantageous to the student and to the public.

In the first place, I can give my testimony that the Professor, in the concluding lecture of the last session, did assert the astounding fact, that “*the Governors were perfectly satisfied with the present lecturers, and that they would not appoint another on cattle practice.*”

Now I can honestly say, that, however the Governors may be satisfied with the present state of things, the student and the public are not. I would ask, why is it that there is such a Demonstrator at the College? He is, I grant you, a quiet, gentlemanly, and good hearted fellow, and one whom I respect; but, then, he is not a good anatomist, and, if he were, he has not the power of imparting his knowledge to others. Many a time his demonstrations have not exceeded ten minutes, and, perhaps, these being given not oftener than every third or fourth day. I consider that a good demonstrator is of the greatest importance and value in every school of anatomy, and the want of such an one is a very great loss to the students.

I will now go to the most industrious gentleman at the College, viz., Mr. Morton. He is not only the clerk or secretary to the

College and the Veterinary Medical Association, but he is the legally appointed lecturer on chemistry and materia medica. Why, I would ask, do not the Governors make the salary sufficient for him, as a lecturer, without his being obliged to fill a situation so much inferior? It is degrading, both to the lecturer and the College, to have such an amalgamation.

Often have I been surprised that he should be enabled to lecture at all, considering the multiplicity of his engagements; but he is a man of tact and persevering industry, and he is well known to be so to all the College. As secretary to the Association, he must never be lost. His heart is in that cause. It is his own.

I will now turn to the Assistant Professor, Mr. Spooner, and I would ask, who can say a word against him? I am sure if the College does not prosper, and is not what it ought to be, it is not his fault, for I really believe he wishes it to be perfect; *and to him I look for its purification, and the placing of it on an equality with the first continental schools.*

If his lectures, at times, have not been delivered regularly, I ask whose fault was it? The Professor's: for this latter gentleman was not attending to his duty at the College, and the former had more than enough to do to attend to his own duties. In order to judge of his value, look at the lecture room: or recollect what was the appearance of the dissecting-room when he was demonstrator. There is now, and there was then, scarcely a student absent.

As to the Professor, I cannot say of him as I did of the Assistant Professor, that no one can find fault with him; for I believe that there never was a more irregular, unsystematic course of lectures delivered (so far as I heard them) than his during the last session. Instead of commencing with the symptoms, and proceeding with the nature, cause, progress, treatment, &c., of a disease, he jumped from one to another, and also to other diseases, so that we scarcely knew at last what he was lecturing about. It was almost an impossibility to take the substance of his lectures down; indeed, I should have liked to have seen them in print as delivered by him, for they would have been a great curiosity of their kind.

When he had the table loaded with specimens of disease, he used to put me more in mind of a man going round at a wild beast show, explaining the different animals, than any thing else; and, as to cattle pathology, he is entirely ignorant of it, and a laughing-stock to those who know the least of it. At the end of each lecture on the different diseases of the horse, he used slightly to allude to *the same disease in the cow*, &c.! and a most miserably meagre account he gave of them. Indeed, I call it humbugging the students and the Agricultural Society.

I wonder how *any man* can take upon himself to fill the arduous

situation of lecturing on the diseases of the horse and *all* domesticated animals. The best informed person would have enough, and more than enough, to do with either of them. The present Professor, however, is not, in strictness, fit for either; and I am confident that there are those in the profession far more competent to occupy his chair, and more likely to improve the veterinary profession, and to raise the College in public estimation. He appears to me to be one who does not keep pace with the increasing knowledge and reforming disposition of the age.

I regard the Veterinary College and the education therein afforded as a national disgrace. Look, I say, at the present state of it, with only a professor, assistant professor, lecturer on chemistry, and a demonstrator! The first totally unfit for his situation, as connected with cattle pathology. As to the lecturer on chemistry (Mr. Morton), he only received his appointment about eleven months ago, so that during a space of nearly half a century there was no appointed lecturer; and yet the students were examined on that which they could not learn, and then most imperfectly, without a fearful sacrifice of time in attendance on schools where chemistry and the materia medica were taught with reference to the human being alone. Even now that Mr. Morton's appointment has taken place, he is compelled to hold the situation of secretary, or clerk—as he is contumeliously designated by his superiors—in order to enable him to live. Shame on such a College and such Governors to have it so!

Is it likely, however talented and industrious he may be, that he can always come before his class prepared in the way he could wish, when his time, which ought to have been spent in the study or the laboratory, is occupied in the daily routine and drudgery of the office of the College? I most positively assert and believe, that no man—not even Mr. Morton himself—can keep pace with the discoveries and comprehensiveness of “that beautiful science chemistry,” and bring forward the different facts and experiments in the way he could wish or ought to do, without his whole time being devoted to the subject. I really think it infamous that the only Veterinary College in London or in England will not afford or have a lecturer on chemistry to a class of from 80 to 100 students, without his being obliged to unite it with an inferior occupation, in order to live and to appear as he would wish to do in such a school, there being, at the same time, plenty of funds for that purpose, if not swallowed up by another; or, if there were not, that sum being easily obtained by an increase of the poor beggarly initiatory fee.

As to the Demonstrator, I fearlessly assert that he is not qualified for the situation which he now occupies; yet I do not wish to



lose him, for there is work enough at the College for him which he is highly qualified to execute.

It has been formerly asked, "what has the Veterinary College done for the nation?" I answer MUCH, but not half what it might have done in the time. Where are the Veterinary Transactions that were to have been published? Ay, "where are they?" Where are the works—Experiments on Animals, Reports of Cases—that should have been published? To the students of the day the increasing knowledge of the professors might have been in some degree imparted; but to the world and the students of former days it is lost.

I consider that the College ought to have every thing within its own walls, without the pupils being compelled to travel three or four miles to hear lectures. There ought most decidedly to be another lecturer on the diseases of all domesticated animals. *The present Professor cannot attend to the whole; no single individual can do it.* A professor should be appointed on botany and the first principles of agriculture; and, if it were possible, a farm should be attached: and why not a lecturer on general comparative anatomy?

To shew the want of additional lecturers, or greater industry, I would refer to the last session, during which Mr. Sewell delivered, I believe—and I was a constant attendant there—only ten lectures between the 10th of April and the 17th of June, being ten weeks. Illness was assigned as a cause for this, and with some truth; but the general opinion was that it was more something else mingling with it—that there was a systematic spinning out of his lectures. Few, indeed, were sorry for the loss of them, and rarely half the students attended when they were delivered. They were unwilling to lose their time, or to travel from distant parts of the town or the country, when they might not hear any lecture at all; for the Professor never had the good manners to give notice that he did not mean to lecture, or could not lecture; nor did he once offer an apology, however long he was absent. It was no better the session before, when, out of nearly two months, I only heard him lecture twice. It was little better during some of the last years of the late lamented Mr. Coleman; but in him illness really existed. I, therefore, say, that if old gentlemen occupy these important situations, and to whom, as a matter of course, illness will oftener occur, they ought to be prepared with a tolerable substitute, so that students should not be at such a loss as they have been at this College.

I do complain of the fact, and it was the complaint of the whole of the students, that although it so often happened that there were no lectures, no notice of it on the previous day, or even on that

morning, was ever posted in the theatre or elsewhere; and the students wandered about, uncertain what was to become of them. No *public* notice was ever given respecting operations, but the circumstance was merely mentioned to a few with whom the Professors happened to come in contact, and the rest, not being at the College, because they were not certain that there would be any thing worth going for, knew nothing about it. Then, again, the Professor was often a quarter or half an hour over his time when he did lecture. If such things as these were to take place at the hospitals, the students there would not put up with the insult; nor would they here, had they one spark of independence about them: but I know well they dare not speak, for they would be marked as black sheep, and, knowing this, I thus speak out for them.

Another thing is, the bad regulations in the dissecting-rooms. It is well known that during the last session but little dissection took place, and they who were somewhat more industrious than the rest were annoyed by a lot of idle, dissolute young men, who seemed to have no other motive in attending there than to kick up a row, and annoy others that were not like themselves. One stimulus to good dissections would be the awarding of prizes for the best anatomical preparations; but here nothing of the sort is offered—not even a certificate of merit for constant attendance in the dissecting-room: in short, there is not a single prize offered to the students by the College for any thing.

There is very much wanted at the College, near the dissecting-room, a sort of reading-room, where many a spare moment might be spent; but there is nothing of the sort; and the consequence is, much time is spent in the annoyance of others in the dissecting-rooms.

A bell would also be very useful to announce the hour of lecture, as often, while dissecting, the time passes by, and the lecturers are interrupted by late attendance. A clock in the dissecting-room, perhaps, would be a substitute for the bell.

There is also a very *necessary* article wanted as an appendage to the College, the present one being a dirty and disgusting place, and frequented indiscriminately by the grooms: but not so with the Professors—theirs are locked up.

One thing I reluctantly touch upon, and that is, the Medical Examiners. On this point I am, like every one else, thankful for their past services to the veterinary profession: but I cannot help thinking their services could now be readily dispensed with; for I think that it would be a disgrace to the profession if there were not a sufficient number of veterinary surgeons competent to that task without their assistance. I know that it is thought by some persons, that, if veterinary surgeons were examiners, they would



be differing with each other as to the treatment of disease; but this I cannot think. I am sure that all petty differences would be purposely avoided; and I take the manner in which the examination of students in the schools of human medicine is conducted as a sufficient illustration of what our examinations would be. I look upon the matter in this light,—that if veterinary surgeons were examiners (I do not mean two or three, but if the board were constituted of them), we should have more really *useful* students leaving the College—men that were “fit for active service”—men that would not disgrace the profession, as too many do when they leave the College and commence the practice of their profession. I do most positively assert, that if young men have never been in the service of a veterinary surgeon or a medical man, or served an apprenticeship to one of them, the greater number will not be competent to begin business on their obtaining a diploma from the present examiners; for at the College they will scarcely meet with one-fourth of the varieties of disease which they would if connected with a country practitioner in good practice.

I think the veterinary surgeons would give them a good, genuine, searching, and *useful* examination, and not such as is often the case now. I know it well. I have seen the “list of gentlemen who have obtained their diplomas” before and since I did, and some of them were totally incompetent to follow their profession with pleasure to themselves or honesty to their employers—men who never served an apprenticeship—never had even a tolerable education—knowing scarcely any thing of anatomy, or chemistry, or practice, and not likely ever to know it, as they were always at any thing and every thing except what they should be. In short, they have “passed” to the astonishment of their fellow students, and even of themselves. I can justly say, from being intimately acquainted with them, that they were *not* “fit to practise the veterinary art;” and I consider myself better able to give an opinion on their abilities than the *medical* examiners were. Had they been examined by a board of veterinary surgeons, I know how it would have been with them; and I know now full well that the day will come that these young men will wish they *had* been rejected: others have been rejected far more competent than they, and have been thankful for it. It is often thought that there is more luck than any thing else in passing the examination. I am sure that if veterinary surgeons were examiners, there would be a greater dread of being rejected than at present.

How is it, I would ask, that, as the English Agricultural Society has allied itself with the College, it does not see to the appointment of a lecturer on cattle pathology? Of what use, I would say, can such an union be, if the agricultural interest is not benefitted!



It greatly errs if it thinks that the Professor has either time or ability for such a task. I would earnestly entreat the Society, that some one should be appointed to listen to his lectures on cattle pathology, when they will soon be convinced that their £200 a year is paid for next to nothing, unless it be to gull the students.

I also take it in another light, that, under his superintendence the College will never be raised in public estimation, nor will the people be induced to send cattle to the College for treatment, if there is not a person capable of treating their diseases. I would ask how many of those that were brought to the College last season were cured? I answer, not one: and even those that were sent to the College were actually bought to practise on.

Again, there ought to be a few lectures expressly on medical jurisprudence; but nothing of the sort ever takes place, except a passing notice of what is unsoundness.

This, Mr. Editor, is a painful subject. I know you hate it; yet I am, like yourself, convinced that a reform must take place, and the sooner it is effected the better. If the College and the Governors do not think proper to make that alteration in it that is requisite at the present time, I would throw out the hint of rousing the public voice for the establishing of another college, upon a broad and liberal basis, which shall fulfill the noble object which this was intended to accomplish, and where the professors shall be appointed according to their merit. Why delay the thing? for I am sure this College has been tried long enough; and that if does not soon reform, it never will. I am also sure that if another was established, and that the professors were more numerous and efficient than some in the present one, it would meet with the approbation and the sanction of the public, the profession, and students.

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## ON PUERPERAL FEVER.

*By Mr. SNEWING, V.S., Rugby.*

THAT peculiar, interesting, dire, and destructive disease which affects cows after delivery, designated *Puerperal Fever*, I perceive has been again discussed in the arena of science by some of the members of our Association, and it remains for them and the profession at large to finish the great and noble task which has been begun by the masterly hand of a FRIEND.

I imagine that, ere long, experience and observation will bring the majority of the profession to coincide with his opinion in viewing it as a disease of the nervous system. We may, and we shall for

a time, be retarded in our progress by difference in opinion, arising from the misconception and the mistaking the cause for the effect; but in the end the facts which will be adduced, and the force of truth, like merit, will rise above every opposing obstacle.

I, for one, infer that the universal appearance of peculiar abnormal lesions, and the deranged state of certain viscera, stamp the character of the disease; and it is this, aided by the manifestations of morbid actions and appearances during and after life, that have induced me to consider the general

*Predisposing cause* to be a depressed or weak state of vital power, especially as it stands related to the organic nervous system; impairing the digestive and assimilating powers, and which is generally consequent upon the influence of certain physical agents, as inactivity, plethora, &c. and conducing to enfeeble the powers of volition. It may occasionally be dependent upon *pathological* causes, as a pre-existing abnormal state of some portion of the spinal track. All of these concurring to produce debility in some of its various forms, the *excitatory* nerves become depressed, and being no longer able to issue their mandates with energy, the servants of this principle of organic life—the *voluntary nerves*—become indolent and enfeebled, and then accrues the operation of the *exciting causes* which I have arranged into, first, mechanical; second, physical; and, thirdly, pathological.

Under the *first* of these may be considered that state of collapse which is induced by the contraction, alteration, and displacement of structure, consequent upon the expulsion of the fœtus. The *physical* causes may be the excitement attendant upon parturition, premature exposure to cold, or to cold and humidity conjoined; and also high ranges of temperature, which may have been a *predisposing* cause as tending to enfeeble the vital energies, but now, from continued action, becomes an *exciting* one. The *pathological cause* I assign to be a sudden or imperfect division of nervous and vascular action or power, and, what is more than probable, a morbid state of the circulating fluids.

I cannot do better than close this part of my thesis in the language of one whose name will be cherished as long as the science of medicine is known. "Although diminished energy of the powers of life has a marked influence in favouring the operation of the exciting causes, yet something more is required; and this must be referred to a certain constitution of frame, which is influenced sometimes in a relative manner only by relative causes, and at other times only by positive causes; and which often either resists the operation of the usual causes altogether, or yields merely to the combined action of a greater or less number\*."

\* Dr. Copland.

This difference in combination gives rise, in my opinion, to the variations we observe in the form of the disease as affecting different animals. Whether the energies of life are depressed only to an extent sufficient partially to overwhelm the powers of volition, in organs most remote and least under the influence of the *primum mobile*; or, acting in a still greater degree, impair the already weakened state of organic nervous power—interfering with the various functions over which they preside; or whether, from the extension and degree of existing morbid action in the ganglial and vascular systems, prominent affection of the cerebro-spinal nervous system is produced, still the disease holds the same in relation to its *kind*, only differing in *degree*.

I conceive it most probable, that all these varying states and forms of morbid or diseased action can be assigned to have their origin in a deranged state of the spinal organic nerves.

Viewed in its most fearful form, with prominent affection of the cerebral organs, attended with delirium, succeeded by insensibility and coma, and by death supervening, we can trace the effects, the ravages of disease; but in searching for a cause we are lost. Why is this? Had we not present during life morbid excitement of the vascular system co-existent with depressed organic nervous tone—tone whence the heart derived its power—that power withdrawn, and the heart still continuing to propel the vitiated fluid of life along channels whose walls are no longer interlaced with the active “principle of life”—filaments from the neighbouring plexuses of nerves destined to accompany them, deprived of their integral power (but I will not, for I dare not, say that the blood is thus deprived of the “principle of life”), and urged on without guidance. But too true it is, that this morbid excitement gives rise to inflammation—*asthenic inflammation*—of the cerebro-spinal nervous tracts and their meninges. In one word, then, I consider these lesions as the *effect* of the disease; the *immediate predisposing cause* is derangement of the “organic motor nerves,” and peculiarity of constitution; and the more *remote* cause, any thing that tends to weaken the cohesion existing between life and structure.

*Treatment.*—Much discrepancy in opinion here exists among practitioners as to the propriety of blood-letting, and which evidently proceeds from inattention to the existing state of the vascular and nervous systems; little regard appearing to be paid to the all-important fact of excitement in the one and depression in the other being able to co-exist, and both being at the same time of an asthenic character. During this state of delusion, occurring after invasion, during collapse, and before re-action has taken place, or when predominant affection of the brain exists, with coma threatening or already supervening, *blood-letting* is had re-



course to with the most fatal and disastrous effects. But during the stage of præmonition, or when re-action is fairly established, with much vascular and febrile excitement accompanying it, as indicated by the anxious and animated countenance—restlessness, not accompanied by the piteous low—turgescence of the veins upon pressure—and a glow diffused to the surface and extremities—under these circumstances, as far as experience has been my guide, I infer blood-letting may be resorted to with safety; but even then I have my doubts of the propriety of taking such a measure, unless there exists or threatens to be consecutive inflammation of some vital organ. But a timorous thought has broken the spell which was extorting from me the (perhaps) too hasty deductions of my limited experience and observation; and, feeling conscious that I am treading on ground over which the foot-marks of my superiors are impressed, until I possess greater right, I will no longer trespass and wander on this alluring and fruitful path.

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## A CASE OF PUERPERAL FEVER IN A COW.

*By Mr. SAMUEL HODGES, V.S.*

ON the 4th of August, 1840, I was requested to attend a cow, the property of a farmer, who, on my arrival, informed me that she had dropped about four hours. On inquiry, I found that she had calved on the day previous, and he, considering her in a state of convalescence, had turned her out, as was customary on those occasions. She was lying on her right side, apparently free from pain; her muzzle was hot and dry; the ears and legs cold; the pulse 55; the fæces black and hard; and rumination entirely suspended.

The milk-maid informed me that, when the calf attempted to suck on the right side, she evinced great pain, which induced me to examine her mammillary glands. They were slightly swollen, but hard and tense. I immediately abstracted four quarts of blood from the subcutaneous abdominal vein; administered magn. sulph.  $\mathfrak{z}$ xij, combined with pulv. zingib.  $\mathfrak{z}$ ij; applied a strong mustard cataplasm along the whole extent of the dorsal and lumbar vertebræ, and ordered her legs to be well hand-rubbed and bandaged with flannel, and her udder to be fomented with a decoction of chamomile-flowers and poppy-heads.

*Aug. 5th.*—A slight amelioration of the symptoms was observable; the pulse was 50; the ears and legs warmer; a small quantity of moisture was perceptible on the muzzle, and her bowels had been slightly acted upon. Her urine was highly coloured. I gave sp. æth. nit.  $\mathfrak{z}$ ij, in three pints of warm gruel, and fomented the udder as before.

6th.—Decidedly better. She had made more than one attempt to rise. I ordered her to be gently turned over, and administered sulphur  $\mathfrak{z}$ viii, pulv. zingib.  $\mathfrak{z}$ ij, and potass. nitr.  $\mathfrak{z}$ ij, in three pints of warm gruel.

7th.—She had risen, and was eating some malt mash which the owner had given her. The pulse was 40; the muzzle moist; and she had ruminated a little in the course of the morning. Give pulv. anisi, pulv. gentian, pulv. zingib. each  $\mathfrak{z}$ ij.

She gradually improved until the 12th, when she was discharged perfectly cured.

I consider this disease to be an affection of the digestive organs, generally produced by too sudden exposure after parturition. Perspiration becomes checked, rumination ceases, and various organs no longer perform their functions.

I cannot agree with Mr. Robinson, who so kindly forwarded to the Veterinary Medical Association the morbid specimens of a diseased cow, that the case was one of puerperal fever. That frightful disease attacks, in the first stage, the internal membrane of the uterus and the mammillary glands, causing an entire suspension of the lacteal secretion—rapidly advancing to the mucous membranes of the respiratory organs and intestinal canal; delirium ensues, and frequently dysentery\*. Lastly, the inflammation having extended to the external coat of the uterus, the whole peritoneal lining of the abdomen becomes affected, and the poor animal dies a loathsome and emaciated object.

While I perfectly agree with the gentleman who stated that the cow is subject to two distinct diseases after calving, I must beg to differ with him in opinion as to the organs affected in the one, which he states to be a cerebral affection, accompanied with the following symptoms:—a staggering gait; interrupted respiration; the pupils becoming immensely large; the animal reeling to and fro for a short time; then falling and immediately sinking into a state of coma. That is, also, in my opinion, an affection of the digestive apparatus, chiefly confined in the first stages to the third division of the stomach, that viscus becoming enormously distended, and, if not promptly relieved, producing the symptoms already described, on account of the known sympathy existing between those organs and the nervous system.

I imagine that sufficient attention has not been paid to the lacteal secretion in these diseases, as, in the one I have attended to, little or no alteration was perceptible in the early stage, while, in a pure case of puerperal fever it is entirely suspended.

\* I superintended the examination of a cow, the property of J. Mansell, Esq., St. Peter's in the Wood, in November 1839, that died of puerperal fever, and found the mucous membranes of the uterus, colon, and rectum, in an extensive state of ulceration.

## A CASE OF RETENTION OF THE FŒTUS BEYOND THE NATURAL TIME.

*By Mr. HENRY R. STEVENS, Newmarket.*

HAVING met with a case of abortion in a cow, proceeding from a cause and in a manner not noticed in your work on Cattle, or any other work with which I am acquainted, I do myself the pleasure of communicating an account of it to you, hoping the perusal may elicit some remarks from you that may throw light on the subject.

I was sent for on the 6th of December, 1840, to see a cow that had slipped a very fine calf on the previous evening. She had gone rather over her time, was an old and very large carcassed cow, and had never been known to abort before. The history I heard of the case was as follows:—She was found down, and the throes coming on rapidly and violently, and a large body presented itself, which was supposed by the owner to be *the bed* coming down. He was considerably alarmed, and as I live some miles from him, and he considered she wanted instant help, he sent to his shepherd, who came immediately. He immediately relieved the fears of the owner, by informing him that it was the cleansings coming first; and he added, that he feared the calf was dead, which, in the sequel, proved correct. After he had removed the membranes, the nose and one of the feet presented themselves, to which they attached lines, and attempted to draw out the calf by force; but the other fore leg being still in the abdomen, when they pulled, the knee pressed against the pelvis, and prevented them from accomplishing their object. However, getting the cow's feet against the door-post of the box she was in, they, by the main strength of five men, at length extracted a fine dead calf.

My idea as to the cause of this accident is, that the cow had gone over her time, and the fœtus being large, nature threw off the membranes from the uterus in due course, in the same way that she would have done had the calf been removed; but which remained in the uterus from the inactivity in that organ in consequence of age or debility. She had about a month since an attack of the prevailing epizootic, and from which she recovered after two or three doses of sulph. sodæ.

I should have stated that I gave the cow a dose of physic, and that she is doing well.

I am informed sheep are often subject to this accident.

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## TETANUS IN A BULL.

*By Mr. W. BAKER, Sudbury.*

Sir,—I BELIEVE cases of tetanus among neat stock to be of rare occurrence. I met with one about eighteen or twenty years ago, at Mr. Eldred's, of Glemsford, and which case I noted at the time, but cannot now find it. I recollect that no cause could be assigned, but that the limbs were very stiff, with the tail and back up, &c., and the animal suffering much pain. The jaw was not so firmly locked as to prevent our introducing fluids by means of a long-necked drink-tin. The medicine given was asafœtida, opium, and sulph. magnes. sufficient to keep a proper state of bowels, mustard was also made into a fluid with hot water, and rubbed over the spine, and covered with flannel until the poultice was dry, and then repeated; and in three or four days the animal was recovered.

The only other case in my practice is the following, which brought to my recollection the above:—A Mr. Hills, of Great Walldingfield, had a two-year short-horned bull cut by a castrator in his neighbourhood on the 10th of October last. They considered him to be doing well until the 20th, when he was turned into a close yard, out of which he got by jumping a faggot-fence and then some field-fences, in order to get to the cows. He was taken up immediately, and again housed.

On the 23d he was observed to be stiff in his limbs, and slaver-ing at the mouth, which, gradually getting worse, I was sent for on the 28th. I found him so set fast in his limbs as to be scarcely able to walk; the eye very prominent, and apparently nearly forced from the orbit; his back was up, and tail extended, and his jaw so closely locked that, after half an hour's trial, I found it impossible to administer the least thing. He was ordered to be slaughtered.

The scrotum, &c. appeared to have healed, and seemed as usual after the same lapse of time from the operation. Should the above be worthy of notice, make what use of it you think proper. If the publication of such rare cases are of no other use, they will tend to remind the student and young practitioner, that he may expect to meet with such diseases among neat stock as well as with horses; and should it be the means of eliciting the experience, &c. of gentlemen of greater standing in veterinary practice than myself, I shall feel much gratified.

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[Mr. Baker will have done the profession service, if he should stimulate some of his brethren to favour us with an account of the causes and treatment of tetanus in cattle. The Editor of this

Journal has, in one of his lectures on the diseases of the sensorial system, given a somewhat detailed account of it. In his work on Cattle, he has also entered somewhat fully into the subject; but, strange to say, no other writer has done more than glance at it in the most superficial way. It has been often enough described as it exists in calves, sheep, and pigs; but although it certainly is comparatively seldom observed in cattle, it does occasionally attack and destroy the working and the travelling beast, and should not be quite overlooked.—Y.]

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## THE VETERINARIAN, JANUARY 1, 1841.

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Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

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FOR the fourteenth time we bid our correspondents and our readers a happy new year; and that year commences under circumstances far more favourable to the onward progress of our art than any preceding one has done. In despite of the pledge that the education of the pupil should extend to the medical treatment of every domesticated animal, more than forty years passed away, and the diseases of all, except the horse, were literally unheard of. Not a lecture through the whole of Professor Coleman's annual course was devoted to the maladies or the wants of one of them. At length Mr. Sewell, before the decease of Mr. Coleman, aware of the general and increasing dissatisfaction, and in order the more completely to defeat one who was beginning to give certain instructions on the same subjects, proposed to append some lectures on the maladies of cattle to others that he was delivering on the surgical treatment of the horse.

A few more years passed on, and he was appointed professor of cattle as well as equine pathology, and he received a certain salary for the additional labour of these lectures.

The principle being admitted, that cattle should form a legitimate and an important division of the studies of the pupil, it is but right to inquire whether it is fully and fairly carried out. *The majority of the members of the profession have united for this purpose.* In

language respectful but strong they have required the obtainment of a charter to protect the qualified members from serving in certain parochial offices, and to enable them to resist the pretensions of incompetent and unqualified men—an increase of the admission fee, for the better remuneration of the lecturers—the shorter or more lengthened period of the pupil's residence according to his previous advantages—the addition of a certain number of qualified veterinary surgeons to the Examiners' Board, and last, but not least, the appointment of a competent lecturer on the diseases of cattle. A standing committee has been formed to watch over the general interests of the profession, and they have pledged themselves to carry out, in a spirit of liberality and good feeling, all that may be necessary for the farther advancement of veterinary science. Therefore, we say, that this year commences under far more favourable circumstances than any preceding one : but the battle is not yet over, and it will require much determination on the part of the committee and the deputation to accomplish the noble objects to which they are pledged.

At present we will inquire how the matter stands with regard to Cattle. The duty of Lecturer on Cattle has been consigned to Mr. Sewell, sufficiently employed, as every moment of his time previously was, on the pathology of the horse, and a salary has been awarded to him of £100 per annum as a recompence for the additional labour. The Assistant Professor, Mr. Spooner, was not directly appointed by the Governors to deliver a course of lectures on the anatomy and physiology of these animals, but, unasked, he prepared himself for what he considered his new task, and by far the most laborious and trying of the two. He has nobly accomplished his work, and has entitled himself to the gratitude of the pupils.

What is his remuneration ? At one of the early meetings of the Veterinary Committee of the Royal English Agricultural Society it was determined to award to Mr. Sewell, on the condition of his delivering a satisfactory course of lectures on the diseases of cattle, &c., a salary of £100 per annum—to Mr. Spooner, a salary of £80 per annum, on condition of his teaching the anatomy and physiology of cattle, sheep, &c. The remaining £20 were to be given in prizes to the two best students of the year. What has



become of this money? £100 is received by Mr. Sewell, but, so far as we have ever heard, not one halfpenny by Mr. Spooner, and no prizes are awarded to the students. These are circumstances that ought to be inquired into.

We return to the diseases of cattle, and we select the occurrences of the last year, because that having just passed away, any erroneous or false statement may be easily detected. That scholastic year witnessed the delivery of only three whole lectures on the diseases of cattle pathology, by the Professor of that department. It is true that there were a few slight and unsatisfactory glances at the diseases of sheep and cattle, rarely exceeding more than five minutes, when the lecture on the horse was completed. Was this keeping faith with the Governors, the Society, the profession, the students, or the public? Was this sufficient to render the pupil competent to undertake the treatment of the diseases of cattle, sheep, and swine? It is a simple question, and easily answered. But, says the Professor, when pressed on this point, "our Institution has been so long devoted to the treatment of the horse, that it was difficult or impossible to persuade people that we knew any thing about cattle, and there were none sent to the infirmary. This, however, would in process of time cure itself. Mr. Cartwright confirms the fact, that not a cow or a sheep was sent there for medical treatment during the last session; and that all that were bought for the purpose of experiment died. In fact, patients will never be sent to that Institution until it is well known that there are persons at the Institution competent to treat the diseases of cattle, and to instruct the pupil in that branch of veterinary science. A few casual visits to one or two of the dairy establishments under the wing of the superintendent of the yard will go but a little way towards the acquirement of a competent knowledge of cattle practice. The artificial management of a London dairy, and the diseases which are prevalent in a country farm, are as different as it is possible to imagine. Many useful illustrations may be obtained from the metropolitan yards; but he who is qualified to instruct the pupil and establish the reputation of the College must have been born and bred among cattle, and have all the instructions which he communicates based on the sure foundation of extensive and long experience.

"Where," it has been asked, "is such a man to be found?"

We will venture to say that there are several ready to present themselves at the fitting time, and that the *concours* for the selection of the man would be numerous and nobly attended.

It is no matter of surprise that Professor Sewell, having committed himself so far, should be anxious to work out this grand improvement in the education of the veterinary pupil, and every one connected with the Veterinary College and with the interests of agriculture would cordially wish him success. "So much interest," said he, "do I feel in the successful establishment of a school of instruction in the maladies of cattle, that I have determined, if it costs me £300 a-year, to establish an infirmary at Islington for the reception of sick and lame animals. The history of the different cases shall be reported to the pupils, and every elucidation of fatal disease shall be forwarded to the College."

We confess that we see not the slightest hope of the success of such a project. If not one stray beast has as yet been allured within the walls of the Veterinary College, but little additional hope is to be founded on the establishment of an infirmary a little more than a mile off, and at a greater distance than is the College from that on which the best or the only hope of a supply of patients can ultimately be grounded, namely, the central and western and other railways. Let the experiment, however, be tried, if the Professor wishes it, and not at his expense. Let a reasonable time and scope be allowed for the accomplishment of his plan. If it is seriously entered upon, we will, for a certain period, fairly and candidly await the result; but too much time must not—nor must the important interests of the agriculturist—be sacrificed to a mere delusion. We must also have more than three lectures in the course of the session, honestly devoted to the treatment of cattle.

With an extract from the *Mark Lane Express*, in the editor of which paper the Agricultural Society and the veterinary profession possess a warm, a judicious, and a highly valued friend, we close our present remarks.

"There has, perhaps, never occurred a period when the importance of the veterinary profession to the agriculturist has appeared so prominently as during the past year. An epidemic, in some instances fatal, and in all cases productive of great loss to the farmer, has spread, and is still spreading, throughout the country, at-

tacking cattle, sheep, and pigs. It is a malady which, in common with other diseases, human skill, to whatever degree of perfection it may be brought, may never be able to avert. The same diligence and attention to the diseases to which these animals are incident cannot fail, however, to attain a result quite as successful as the study of the diseases of the horse has produced. It should seem, from proceedings now going on, that there is a considerable number of members of the veterinary profession who think that a great improvement might be effected in the system of education pursued at the Veterinary College, and that the profession, as a body, has a right to call upon the legislature for certain privileges which they do not now enjoy. Upon these points we offer no opinion. There is, however, one question on which we entertain an opinion, in common with a considerable number of the movement party, namely, that the course of study adopted at the Veterinary College, in regard to the diseases of cattle, sheep, and pigs, is not by any means efficient. If the question stood as it did before the Royal Agricultural Society made the liberal contribution of two hundred pounds per annum to the Veterinary College for the express purpose of promoting an improved system of education in this *particular* branch, we should have only felt it necessary to appeal to the Veterinary College, as best consulting the interests of the members of the profession, by qualifying them to treat successfully the diseases of animals of such great value to the farmer. As the question now stands, however, we feel ourselves placed in a different position. The Royal Agricultural Society has placed the sum of two hundred pounds per annum at the disposal of the Veterinary College, for the express purpose of improving the system of education in reference to the diseases of cattle, sheep, and pigs. We deprecate the niggardly, meddling spirit, which would seek an interference in the conduct of the affairs of the Veterinary College, merely because a contribution is made to the funds. We should be content to state the object, pay the money, and leave it to the right feeling of the managing parties to see that sum properly expended. But if we are told by members of the veterinary profession itself that the money is not well applied,—if we are told that the receivers of this money do little more than has been done heretofore,—we hold it to be a just subject for animadversion; we



hold it to be the duty of the Council of the Royal Agricultural Society to inquire into the matter."

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The attention of our readers will be attracted by a straightforward truth-speaking letter from Mr. Cartwright. It is expressed in the strong language which becomes such a subject. It is written by an eye-witness of the scenes which he describes, and demands the most serious attention of the Governors of the Veterinary College, the Royal Agricultural Society of England, and every member of the veterinary profession. We cordially thank Mr. Cartwright for it.

He bears a little too hardly, however, on one person—the Demonstrator. It should be recollected that, at the commencement of the last session, the situation was perfectly new to Mr. Barth. He did considerably improve, and that improvement has been more rapid since the close of the last session. Still we are not sorry that Mr. Cartwright has touched on the subject, for it will stimulate the Demonstrator to greater industry, and render his services more valuable.

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In the course of the last month the Editor has sent a circular—a copy of which is subjoined—to a great proportion of his veterinary brethren. He is fearful, however, that he may have omitted the names of many from whom a contribution would be most acceptable. He would be most thankful for an account of their experience on this matter. His object is to be enabled, at some future and not distant time, to present to the public a history of these epidemics, worthy of the profession to which he belongs.

Accounts from unprofessional men must, to a certain extent, be erroneous and unsatisfactory, but, obtained from the sources to which he is now applying, they will be valuable indeed. They will form a new era in the history of our art, and he knows not by what means the veterinary profession would rise to higher and more deserved estimation.

1, OSNABURGH PLACE, NEW ROAD,  
*London, Dec. 11, 1840.*

My dear Sir,—THE ENGLISH AGRICULTURAL SOCIETY having determined to distribute a circular among its members—the farmers of the different districts—soliciting an account of the late and

present Epidemic among Cattle, Sheep, Swine—its nature, treatment, consequences, &c.—fearing, or rather being assured, that many an error will of necessity be found in communications furnished by such informants, I take the liberty of requesting, and I do earnestly request, that you will kindly furnish me with answers to the following queries.

Your assistance shall be duly acknowledged; and we shall be able to produce, among us all, a history of this Epidemic worthy of our profession and our country. I could wish to have it at your very earliest convenience.

I am, my dear Sir,

Very faithfully your's,

W. YOUATT.

#### CATTLE.

1. Locality?
2. Soil, pasture, and previous feeding?
3. First appearance of the Epidemic?
4. State of the weather?
5. Had these cattle any communication with other stock?
6. Did they travel along the road on which infected animals had travelled?
7. Did any servant, or other person, that had attended on other diseased animals, come in contact with these animals?
8. What is your opinion as to the infectious or contagious quality of this disease? Very particular and full here.
9. What were the earliest symptoms? Did it appear primarily in the feet or mouth?
10. Describe the gradual progress.
11. Treatment, particularly the questions of bleeding and physic.
12. Duration of disease?
13. Number of patients and result?
14. Number of diseased animals in your neighbourhood, and general result?
15. What alteration took place in the milk?
16. How far did the condition of the animal, or his age, influence the complaint?
17. Had it connexion with other diseases?
18. Did it much influence the after-condition of the animal?
19. Has the disease appeared a second time in the same animal, and with what degree of intensity, and what result?

## VETERINARY JURISPRUDENCE.

## A SINGULAR CASE OF LAMENESS.

MARTIN *v.* SHEWARD.

*Edward Stretton.*—Is a private in the second Life Guards, and servant to Captain Martin. On the 24th of June last the regiment was at the barracks at Windsor. Captain Martin then bought the horse in question, which was sent down to Slough to the rail-road, where he met him, and led him to Windsor, two miles off. The horse was very fresh, and was put under his care. He received directions from Captain Martin to physic him, and the medicine was given on the 26th or the 27th. This is the usual course when a horse comes from the dealer's hands. The physic being set, he was put under the care of the riding-master, who gently exercised him in the school for a half or three-quarters of an hour each day. This continued until the beginning of July, when the regiment was moved to the Royal Horse Barracks, near the Regent's Park, in London. This horse was again brought up by the railway, and arrived safe. The owner marched up with the regiment. He knew Captain Murray, a friend of his master's. Captain Martin lent him this horse for a few days. He might ride perhaps six or eight times. He always received the horse at the return of the Captain, and the animal always came in fresh: he was seldom or never out more than half an hour at a time. Captain Murray he believes is now abroad.

The horse went on very well until the 13th of July, when he was found to be lame, and at the request of his master was examined by the veterinary surgeon of the regiment. At his desire the horse was that day taken to the Veterinary College, and examined. He was afterwards taken to Tattersall's, and sold. He did not perceive much difference in the appearance of the feet, but the horse went lame. He had, however, before observed that the animal wore larger shoes than horses like him were accustomed to wear, and these were altered by the head farrier.

*Cross-examination.*—He received the horse at Windsor. He knows nothing about races at Hampton Court or anywhere else. He was never away from the horse, and the horse was never from under his care. He never rode him himself while at Windsor, except when he went with him at a foot pace to Captain Murray's



lodgings. In London, the horse was not exercised by him, but by the riding-master in the riding-school, and he was always present. He was exercised by the riding-master in the same way that horses when they first come into the regiment are exercised. He was broken as a charger. The lessons were given in the riding-school, and in the usual way. Of course he was sometimes stopped in his paces—not sharply, but in the proper way to give him a good mouth. He was always ridden gently. Had never said that he was severely ridden. Of course, as the horse improved the exertion required from him was increased—the exercise became stronger. He took him to the Veterinary College, and saw him examined by Mr. Spooner and the veterinary surgeon of the regiment. He is six feet high, and rides eleven stone nine pounds. He never rode the horse out of the barracks, except once, when he walked him by the side of the relief guard, going to the Horse Guards. Does not know why Captain Murray ceased to ride him. Had not been ridden for two or three days when the lameness was discovered. Thought him lamer on the near fore foot than on the other. Told his master that the horse was lame in the near leg or foot before.

*Re-examined* by the Judge.—He had examined the feet of the horse when he first came. They were different from those of other horses, and the shoes were considerably larger than are usually worn. He was afterwards shod in the barracks, and with the regular cavalry shoe. He did not see any thing particular about the hocks. He did not observe any thing amiss about them.

*Henry Relph*.—Is rough-rider to the 2d Life Guards. Remembers the coming of this horse to Windsor. He often had him in the riding-school, but only at a walking pace, for such were his orders. He was then taken to London when the quarters of the regiment were shifted there. Here his exercise was increased—the walk was increased to a trot. He never used the slightest violence to that horse, nor made him attempt any unusual or dangerous exertion. He fell lame about the 11th or 12th of July.

*Cross-examined*.—He exercised him seven or eight times. He used a snaffle bridle: never forced him to throw himself upon his haunches, or any thing like it. Once only had the horse been out of the cavalry barracks, and that was when he accompanied, one morning, the relief guard. Never examined his feet.

*Mr. Home*, V.S. to the 2d Life Guards, examined this horse on the 15th of July, and found him lame from the deposition of bony matter around the coronets in both feet. He discovered it by examination of the part. When the foot is healthy, the cartilage at the superior and lateral part of the foot is elastic to the touch. The deposition of the bony matter arises from previous inflammation.

He examined the hocks: there was spavin of the near hock. Spavin is the union of two or more bones of the hock going on to exostosis. There are placed at the upper part and on each side of the larger metatarsal, or principal bone of the hind leg of the horse, two smaller bones, one on each side, united to the larger by cartilage, and on which, and especially on the inner one, a considerable portion of the weight of the horse is thrown. This connecting cartilage is an elastic substance, and, by its yielding to the force impressed upon it, lessens the concussion and injury that would take place. A degree of weight may, however, be occasionally thrown on these bones too great for the elasticity of the cartilage to resist, and inflammation is set up in the part; the cartilage is absorbed, and bone deposited, and in greater quantity than the cartilage; and hence a certain stiffness of the joint, and a bony excrescence growing on the part, and which is called a *spavin*.

This bone, once deposited, remains there for ever; and from the elasticity of the part being destroyed by the removal of the cartilage, the joint is liable to shocks and injuries which it would otherwise have sustained without harm. The spavin is too apt to increase, and cause greater and irreparable injury. The horse is unsound from the previous injury interfering with the action of the joint, and the possibility or probability of greater mischief occurring hereafter.

He went with the horse to the Veterinary College on the very day that he was consulted about it. He there saw Mr. Spooner, by whom the animal was examined. He thinks that the appearances on the coronets and the hock must have been evident before the 24th of June. In consequence of this examination by Mr. Spooner and himself, Capt. Martin wrote to Mr. Sheward, giving him notice that the horse was unsound, and that he should sell him if he were not taken back, and the price returned.

*Cross-examined.*—He particularly observed the coronets—the cartilages had become ossified. There was perfect ossification. It was ascertained without the possibility of mistake, and at the anterior portion of the coronet. The whole of the cartilages had not acquired a *bony* structure, but only at the anterior portion of them, and so as to be discovered by any person of skill making a careful examination. The fore feet were much contracted. Both fore feet were so, but the off foot was the most contracted. There was also an *unnatural* heat about the foot, although not that which could be said to be positive inflammation. This ossification could not have been formed in six weeks. There may or may not be considerable inflammation when the bone is forming. It may be formed more or less quickly. This depends on the cause which produces it, and which may be slow or active at the commencement. The effect of this inflammation



is to make the horse walk "*groggy*," as it is termed. He does not know what a "*cribbling*" horse means. He never heard of the term: a *crambling* horse in his going he, however, has often heard of—but *not cribbling*—meaning, thereby, a horse whose action was imperfect. He does not step out freely. He saw the horse afterwards on the 23d of the same month. The lameness was then increasing. He was lamer on the second occasion. On the 23d there was enlargement also, and heat and pain on pressure under the near knee. This seemed to be acute or fresh.

He should term any deposition of bone on the small bones on the inside of the hock, *spavin*. The enlargement here was perceptible to every careful observer. It did not, however, make the horse lame, or apparently interfere with his action. He should think, from its size, that it had existed a considerable period of time. There was no inflammation or lameness now—no active deposition of bone now going forward. He would say that the deposition on the coronets was incurable, and it would require a considerable length of time both to have formed or to become partially absorbed.

*Re-examined.*—Slight exercise, such as this horse had got, was very unlikely to produce inflammation. The morbid deposit of bone might be somewhat lessened by absorption, but it would never again become cartilaginous. When a spavin is forming, there is almost always lameness; but after the formation is completed, the lameness does not always continue. There was no lameness here, nevertheless the action would be somewhat impeded, and at some future time, in leaping or galloping, mischief might be done. The first cause of the affection in the fore feet might probably be inflammation of the navicular bone, or its synovial membrane. This would, in such feet, invariably produce contraction of the foot. He is not absolutely certain that this was the origin of the disease in the foot, but he is very much inclined to suspect it. There was too plain a chronic and tangible evidence of disease on the top of the coronets to make him doubt the *soundness* of the animal. Could not swear that navicular disease was present. Has no *certain* means of knowing, as he can neither see nor feel the seat of the disease, and, therefore, considered as the cause of lameness in this case the bony enlargements round the coronets, which he had the means of distinctly proving by the touch. These morbid enlargements were perfectly organized.

*Assistant Professor Spooner.*—On the 15th of July he examined a horse for Captain Martin. On seeing the horse, he recognised at once the existence of a spavin in the near hock. He did not give the animal a *general* examination, but confined himself to that on account of which the horse was brought to him—the lameness. He was lame in both fore legs, particularly the near one,



and, from the peculiarity of his action, he suspected that the seat of lameness was the feet. He passed his hand down the near leg, and an enlargement was evident on the inside of that limb, below the knee. He then examined the feet: they were somewhat contracted, but not much so. On passing his hand round the coronets, he found that the cartilages, which should be yielding, were hard, and was convinced that some portions of them had been converted into bone. He was of opinion that this morbid structure was sufficient to account for the lameness. He considered the horse unsound, both from the disease of the fore feet and of the hock. In his opinion he was unsound long before the 14th of July. The deposition of bone, he thought, had ceased: this was evident from no pain being evinced on pressing the parts, and the absence of other symptoms indicative of inflammation. If the inflammation runs high, cartilage can be converted into bone in a short period of time. He could not say how long the spavin had been formed, but it had evidently been there during several months. He judges of this from its size, the absence of pain, and its little apparent effect on the action of the leg.

*Lord Abinger.*—Spavin may exist without occasioning detectable lameness, but the natural function of the joint must be impaired by it. The hock is a peculiarly complicated joint. There are ten bones entering into its formation, but only two of these are moved upon each other by the action of the muscles in progression, the others being intended to yield to the weight thrown upon them, and thereby act as cushions to the limb. It is this elastic movement which is destroyed by spavin, and the horse thereby, if not positively lame, is rendered more liable to become so. Spavin constitutes unsoundness, for it is a diseased structure, which always interferes with the natural action of the part. Cases are not unfrequent in which spavin renders a horse almost useless.

The form of the feet was not such that he should have been induced to reject the horse if he had not been lame.

*Cross-examined.*—He was certainly a fine and handsome horse, but he did not consider that he had very high action. He both walked and trotted him. The bony deposit on the coronets had been there for a considerable length of time. It could have been discovered on the 24th of June. He thinks that it must have been there some weeks, for all inflammation was gone. It was on the front part of the cartilage, and a portion of the cartilage also beneath the crust he thinks must have become ossified from the rigid state of it above. Both feet were somewhat hotter than they should be. There could never be afterwards an absorption of bone and a deposition of cartilage in its place. Any person of skill, he thinks, might have discovered it. The whole of the cartilage

was less yielding to pressure than it should have been, and in some parts it was absolutely bony. He ascertained the presence of bone to a far greater extent than the size of a pea: it was more than half an inch in breadth. There were deposits of bone on both sides of both fore feet, and that on the off was larger than that on the near, although he was most lame in the near leg. He would never become perfectly sound again, but he might so far recover that there might be little or no lameness detectable. Slight exercise might not shew it, or it even might not be detectable at all.

On the near fore leg there was a bony enlargement, but it did not appear to interfere with the action of the horse. It was an exostosis or morbid deposit of bone. It seemed to be connected with the main bone of the leg, and, he thinks, with the inner small bone also.

*Re-examined.*—He has known some horses with these affections work for months without lameness. They might do slow work without being lame, but they are more liable to lameness with it than without it.

*Mr. W. Youatt.*—Had not seen the horse in question. Has no doubt, from the evidence which he has heard, that the horse was spavined, and a spavined horse is, of necessity, an unsound one. He may be capable of the exertion usually required of him—he may be useful for various purposes—he may be capable of all ordinary work, and his action when thus employed very little impaired; but when some extraordinary exertion of speed or strength is required, having been deprived of the advantage which the yielding elasticity of the cartilage of the hock affords in its natural and unimpaired state, he may break down at once. The far greater part of the lamenesses behind are attributable to spavin.

*Cross-examined.*—Has written a work on the anatomical structure and general management of the horse. Is editor of a periodical—THE VETERINARIAN. Knows an occasional writer in it—Nimrod, or Apperley. He is justly celebrated as a sporting writer, and a judge of horses. He has contributed a paper to this periodical on spavin. He gives a list of several celebrated horses that were spavined who always headed the chase, and never exhibited the slightest lameness. Is not answerable for the opinions of any of his correspondents. Sporting gentlemen have a right to their own opinion on sporting subjects. The private opinions of the editor are not implicated in this. Recollects the horse Jupiter, and others, who were spavined to the greatest degree. It was an interesting account; but it only proved that there were exceptions to a general rule. Too many spavined horses become lame, and are destroyed many years after the first alteration of the structure of

the hock. He did not understand the question, and it was perfectly new to him, whether a bony exostosis might not grow on the place of spavin—on the spavin bones—on the very crust of these bones—without producing any alteration of structure or of function in them?—The question being repeated, he replied, that he never saw such a case, or heard of its occurrence; and he could scarcely credit the possibility of its existence.

*Re-examined.*—He considers that every horse with an enlarged hock is unsound. The structure of some important part is altered, and the hock is, to a certain degree, weakened. These horses may do well for a time, and for a long time, with fair and even hard work; but at length a certain proportion of them are sure to fail, and evidently from the effect of the spavin.

### DEFENCE.

*James Tickler*, foreman to Mr. Sheward.—Went to Romford at the latter end of March, to meet this horse, and bring him to town. He looked after him in Mr. Sheward's stables until the 24th of June. He did not, however, dress or clean the horse—it was not his place; but he drove him both in single and double harness about the streets and in the Park. He was exercised from an hour to an hour and a half at a time. He was sometimes walked, and sometimes briskly trotted, for a mile or more. Never saw any symptoms of lameness. Recollects Lord Poltimore's looking at him. Took him to the Western Railway. He was then in the same state, and as perfectly free from lameness as when he first came to his master's stables. He still lived with Mr. Sheward when the horse was brought back in August.

*Cross-examined.*—He is not now in Mr. Sheward's employment. The horse was exercised as other horses are. He did not ride him, but broke him into harness-work. Mr. Sheward, or his son, used generally to ride the horses. He recollects a conversation with Captain Martin's servant, who wanted to get just such another horse.

*John Smith.*—Was in Mr. Sheward's service from March to June, and still lives with him. He looked after and dressed the horse. He saw no lameness about him.

*Taret Jones.*—Was riding this horse when Captain Martin first saw him. He had seen him two or three months before. Had ridden him at a good pace sometimes. Never suspected him to be unsound. He has all his lifetime been accustomed to horses. If there had been any lameness, he must have seen it.

*Cross-examined.*—Has known Mr. Sheward many years. He



was trying the horse as a riding-horse. Rode him two or three times. He is in the habit of buying and selling horses.

*Mr. W. Mavor* is frequently employed by Lord Poltimore to examine horses for him. He examined this horse for him on the 16th of June—he examined it particularly carefully—he examined the feet well. The cartilages and coronets were perfectly good; his paces were good, high, and elastic; he was not in the least degree lame: there was nothing to make him believe that he was unsound. The horse was not purchased on account of his age: he was an aged horse, and there might be some little danger attending the operation of castration: for this reason, and for this only, he was not bought.

The horse was perfectly sound. He had him two or three days in his stables. He saw the horse again on the 3d of August: he was then very lame in the left fore leg; there was recent splent on the inside of the leg, and near to the knee. The horse flinched, and threw his leg up the moment pressure was applied to the splent. He traces the lameness to this splent, and to this alone. The horse was under his care from this time until the 20th. There was great inflammation under the knee. Some lameness remained when he sent the horse away on the 20th.

He saw him for the last time on the 7th of October. The horse was not lame then—not in the slightest degree: he was decidedly not lame in his feet: there was no ossification of the coronet: he examined him particularly on this point. There was not the slightest ossification; they were the most elastic, pliable cartilages he ever saw in his life. It was the perfect natural elasticity of the parts.

There was on the near hock a slight malformation, not amounting to disease, and not interfering with the action of the horse in the slightest degree. There are several bones which go to form the hock: there are two layers of them, flat and somewhat thin. This enlargement was on the outside of one of them, causing a little projection, which might be both seen and felt. It was just such a projection as would be caused by a portion of a walnut-shell being placed on any body. It was on the external surface of one of the small bones of the hock, and therefore did not interfere with the action or use of the joint\*.

\* The bones of the hock of a horse were here introduced; it was the specimen which *Mr. Serjeant Bompas* had referred to but not produced in his examination of *Mr. Youatt*. There was a slight projection of one of the small bones of the lower layer: it was evidently one of the cuneiform bones; but at the distance at which he sat, he could not determine which: and there was a long oval projection in an horizontal direction, giving erroneously the idea that this bone, in some state of softness, had been flattened, and a portion of it pressed outward by the superincumbent weight.

So far as he could judge by the external feeling of the part, this was precisely the state of the corresponding bone in this horse. It did not interfere with either the action or use of the joint, nor had it any tendency to do so. He had not applied any remedy at all to the foot.

*Cross-examined.*—He thinks that the excrescence may be traced back as far as the growth of the bone, or to the period when the bones were very young, and not consolidated. It was formed as the bone grew. There was no similar excrescence on the other leg. It was a morbid growth, and there is no reason why that should take place on both legs. Any thing that is different from the natural structure of a part may be called a morbid growth. It never gave the animal either pain or lameness. The appearance of the part, the position of the bone, and his own experience, dispose him to believe this. There is no difference in the external appearance of the skin.

He tried the horse thoroughly on his own premises. The cartilages were more elastic than any he had ever seen in a horse of that age, from the thinness and delicacy of their structure; they were as elastic as they are generally found in a horse at an earlier period. On the 7th October he saw the horse again, and carefully examined him: there was very little enlargement at the seat of splent, and no tenderness. He saw the horse go, and he stepped boldly and well.

This spavin, as it is said to be, was about the thickness of the shell of a walnut; in the centre it might project about a quarter of an inch, and terminated in a kind of ridge. It would not affect the horse's going; it would not have the same appearance as bone formed from inflammation.

*By the Judge.*—A horse with a formation of this kind is, in your opinion, a sound horse? Answer—Decidedly so.

*Mr. A. Henderson, V.S. to the Queen Dowager.*—Had seen the horse. He was sent by Prince George of Cambridge about the middle of May to look at this horse, and see whether he would suit his Royal Highness. He saw him in all his paces. His action was exceedingly good. There was nothing to indicate disease of the cartilage at the coronet. He recommended that he should be purchased, and he would have been so were it not that the Colonel objected to having an entire horse in the regiment. There was nothing to render him at all unsound. He has seen cuneiform bones resembling those just exhibited. He should have no objection to them—they did not interfere in the least with the paces or value of the horse.

*Cross-examined.*—He had him out a quarter of an hour, and saw nothing wrong about him.

*Mr. Joseph Boston, V.S.*—This horse was sent to him to be shod from March to June. There was no lameness during the whole of that period—no disease of the feet or of the coronets. He observed his hocks. There was not any formation to lame the horse, or to have a tendency to do so. He saw him again in October. He was sound. The coronets were perfectly sound. No ossification of the coronet—no lameness of the hock.

*Cross-examined.*—He had nothing to do with the horse, except shoeing him. Has seen the horse repeatedly, but never professionally examined him. Never put on him broader shoes than usual.

*Mr. James Kerr, V. S.*, examined the horse on the 8th of August; he was lame from splents: the lameness was then subsiding; it was immediately under the knee, extending from the inner head of the large and small metacarpal bones to the knee-joint. His attention was particularly directed to the feet.

There was no disease about the coronets. His feet were very good; is confident the lameness arose from the splent. There was an enlargement on the inner and lower part of the hock, but so situated as not to interfere with the action of the joint. There was no pain evinced on pressure of the splent on the near fore leg, but when the knee was flexed there was evident pain.

[In answer to a question from Lord Abinger,—he could not recommend the horse to him or any person with such a splent.] It might have arisen from a blow.

*Cross-examined.*—The enlargement on the inside of the hock had nothing to do with the cartilage between the cuneiform bones. When two or more bones of the hock are united by ossific matter, then we have spavin; but here, in the morbid specimen produced, is a deposit on one of the cuneiform bones, which could not possibly do harm. He judges of the consequence of a spavin from its situation and size. In this case, it did not at all interfere with the action of the joint.

*G. Brusath*, foreman at Tattersall's, has been accustomed to horses from his childhood. He saw this horse in July, and observed his action in the trot and the walk. He did not examine him as for purchase, but he is firmly of opinion that there was no lameness about him. When he afterwards came to Tattersall's, he was lame—he thought. The leg felt hot, and filled.

*W. Banks* has been accustomed to horses from his youth. He saw this horse twice. He had beautiful action, and was not in the slightest degree unsound. This was in June. The first time he was accidentally in the yard, and Mr. Sheward told him that he would shew him a handsome horse. It was, indeed, a handsome one, and apparently as sound as a bell.



*Samuel Sheward, jun.*, went to Hertford, to serve a subpoena on a person named Rowell, from whom his father bought this horse. He was a-bed, ill with a brain fever.

Verdict for the plaintiff, with damages, £174.

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This trial involves in it two or three rather important points of veterinary jurisprudence.

Captain Martin, of the 2d Life Guards, buys a high-priced horse from Mr. Sheward on the 24th of June, 1840. The usual warranty was given, and it is still affirmed by the defendant that the horse was perfectly sound, with the exception of a small osselet on the inside of the hock, and of which no notice was taken by either the buyer or the seller.

The horse is moderately exercised, and goes on very well until the 13th of July, when he became exceedingly lame. He was accordingly submitted to the inspection of Mr. Home, the veterinary surgeon of the regiment, who found that there was a deposition of bony matter around the coronets of both feet, and this arising from previous inflammation, and the existence and state of the bone proving that the evil was of more than three weeks' growth. He likewise found that the fore feet were hot and much contracted, and also that there was spavin of the near hock. He recommended Captain Martin to have farther advice on the business, and the horse was taken to the Veterinary College.

He was examined there by the Assistant Professor, Mr. Spooner, who recognized at once the existence of the spavin, and found the animal lame in both fore legs, and particularly the near one. He found the feet very hot, and discovered that a portion of the cartilages had been converted into bone, and he believed that this morbid structure was the cause of the lameness, and would probably hereafter not only interfere with the functions of the hocks, but cause occasional lameness, for by no process could the bone be absorbed and elastic cartilage deposited in its place. He likewise observed an evident enlargement on the inside of the limb below the knee.

In reply to the Judge, he stated that the elasticity of the hock was interfered with, and to a certain degree destroyed, by the existence of spavin, and the horse either rendered positively lame, or more liable to become so.

The horse had also been examined by Mr. Turner, who was ready to speak of its lameness, and the serious character of that lameness, and the cause of which must have existed long before the sale of the animal.

Mr. Youatt, who had never seen the horse, was called on to speak of the nature of spavin, and which he affirmed to be, and during the life of the animal, unsoundness.

On the faith of Messrs. Home and Spooner's opinion the horse was tendered to Sheward, and the return of the money demanded. This being refused on the ground that it was nothing but a splent which produced the lameness, and for which he was not answerable, as it might occur without warning to the soundest horse, he was sent to Tattersall's, and sold. He was re-purchased by Mr. Sheward, and immediately committed to the care of Mr. Mavor.

Mr. Mavor states that he had examined the horse before he was sold to Captain Martin—that the cartilages and coronets were perfectly good. He was sent to him for treatment on the 3d of August, he was very lame on the left fore-leg, but it was from recent splent, and that he traced the lameness to this splent, and that alone; that there was no ossification of the coronet, for he examined him particularly on this point, and they were the most elastic pliable cartilages he ever saw in his life.

There was a slight malformation on the near hock, but it did not amount to disease, and did not interfere with the action of the joint in the slightest degree. It was on the external surface of one of the small bones of the hock, and had nothing to do with the action or use of the joint. A preparation was shewn him in which there was an excrescence of this kind, which he thought must have been formed when the bones were young and not consolidated.

The horse left him on the 20th of August. He saw him again on the 7th of October—there was still a little enlargement on the place of splent, but no tenderness, and the horse stepped boldly and well.

Mr. Henderson had examined the horse for purchase. He saw him in all his paces, and much approved of him. He thought nothing of the projection of the cuneiform bones.

Mr. Boston, who superintended the shoeing, had seen no disease of the feet or the coronets.

Mr. Kerr had seen the horse on the 8th of August. There was no disease about the coronets—the lameness proceeded from the splent. The enlargement on the inside of the hock had nothing to do with the cartilages between the cuneiform bones.

Mr. Field was present, but not called upon, who would have given similar testimony as to the lameness being that of splent, the effect of the osselet on the cuneiform bones, and the effect of old spavin on the value and usefulness of the horse.

Our readers will forgive this imperfect summing up of the case. There are two or three points about it which should be finally settled. Is it possible that bony deposition in the place of the lateral

cartilages shall altogether disappear, the former and natural structure be resumed, and become in the highest degree elastic and pliable in the space of a few weeks, or at all? Are not these osselets on the cuneiform bones, and entirely unconnected with the interposing cartilage, things of very rare occurrence? Is it possible to distinguish them from spavin, or the disappearance of the cartilage and the formation of bone? and would it not be opening a door to all kinds of dispute and roguery, if the existence and harmlessness of such excrescences were admitted?

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## MISCELLANEA.

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### THE LATE JUDGE VAUGHAN.

IN horse causes he never had his equal; for he knew the frame of a horse, and the whole veterinary pharmacopœia, as well as Coleman himself: and he knew more; every horse-dealer dreaded him. There was no telling *him* a lie about stifles, ring-bones, splinters, frogs, and the like:—he knew more about those, and all other diseases of the horse, than the best groom in England. And he had a singular taste in managing a horse cause, one which will hardly appear credible except to those who knew him on the midland circuit. He not only examined the questionable horse himself, but he almost invariably had the horse not exactly produced in court, but at the court-door!—"Gentlemen," he would say to the jury, before he began to examine his own witnesses, "the horse is at the door: be so kind as to judge for yourselves." There was an apparent candour about this, backed as it was by his great knowledge of the horse, which rarely failed with a country jury. The fact is, he always gave the jury a beautiful lecture on the horse, and they thought that it was almost impossible for such a man to be mistaken. There was not much public harm done by this prejudice in his favour, for, in the numerous horse causes which have come under our notice, we have invariably found faults on both sides.



THE  
VETERINARIAN.

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VOL. XIV, No. 158.] FEBRUARY 1841. [New Series, No. 98.

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THE GEOLOGICAL HISTORY OF THE HORSE.

*By Mr. W. F. KARKEEK, V.S., Truro.*

[Concluded from page 31.]

MR. SAULL'S elucidations proceed regularly from a fundamental principle as a basis, that the granite is the most ancient stratum, for on this all the other beds are successively deposited; and he is confirmed in this opinion by observations made in different parts of the earth, which tend to prove that such is the case, for not only in both Americas, but specimens have recently been brought from Australia, which exactly resemble the granites found in Devonshire, in Scotland, &c. &c.

Having established a basis, he then proceeds to chemical analysis, which proves that this rock is composed of quartz, mica, and felspar, in the latter of which only is contained a small quantity of calcareous matter, probably not more than two or three per cent.; but that this is the germ, as it were of production, of the shell, the fibre, and, ultimately, the bone, flesh, and food, so necessary for the support of organized beings when they come to be developed on the surface of our planet.

He then arrives at this conclusion,—that, by the action of water and the atmosphere, this hard substance is pulverized and decomposed, and in that state—when the circumstances are favourable, viz., under a tropical climate, and also saline waters—corallines would germinate from the root or basis beforementioned: these being reduced to powder by the action of the element in which they grew, would, in their turn, reproduce more, and thus the fertilizing principle would continue progressing; and so it is found on analyzation of all the primary rocks, which exhibit a gradual increase of this necessary material in the ascending order.

Now, as this material is found to germinate spontaneously, as it were, in hot climates only, the author deduces some original conclusions, which are of great value and importance, with reference to the effects on our planet.

1st. That matter and motion are universal, and that nothing whatever can be completely passive or at rest.

2d. That the revolution of a planetary body on its axis, and in its orbit round the sun as a primary body, being universal also, definite effects are thereby produced.

3d. That these effects are, *à priori*, light diffused, which light being atomical, although immeasurably minute, the excitation of the atoms being greatest where the recipient body revolves most rapidly, or traverses the greater medium in space, namely, the equatorial parts; hence it follows, as a necessary consequence, that the greater heat will be diffused on its central or equatorial zones, gradually decreasing towards both poles, where the motion of course is slower.

4th. That all parts of the earth's surface partake of the genial influence (so to speak) in regular successive order, requiring immense periods of time to accomplish it; and that our planet is, therefore, constantly and universally progressing, with reference to beings existing on its surface.

5th. That the elevation and depression of the oceanic waters in both hemispheres are also regular and constant, and most probably the effect of motion, although it may be distinct and subject to other laws than the changes of climate before alluded to.

6th. From these facts the conclusion naturally follows,—that our planet is regularly changing its position, *en masse*, with reference to the centre of the system, the sun; that is, although polar axes will always exist, yet that their position cannot be constant, but variable, producing those great changes of position, and consequently of temperature—requiring periods of time almost beyond our calculations, but which, by astronomical investigation, will no doubt ultimately be established.

These are the principles on which Mr. Saull establishes his theory, and which he satisfactorily proves by examining the various strata of the earth. Through all the primitive rocks, from the granite up to the clay state inclusive, no organic remains are found—hence their term *protozoic*, that is, before life; but the calcareous matter has gone on increasing, and in the next stage, in what was heretofore called granwacke, but now the upper silurian, we find life first developed in a few varieties of shell fish only: other beds intervene, almost destitute of organic remains, succeeded by strata of great thickness, containing corals in abundance, and exhibiting, for the first time, their masses in the form and pattern as they grew, with trilobites, orthoceratites, leptera, cyathocrinites, orphis, euomphalus, &c. &c. Abundance of other fossils are found in these beds, indicative of a tropical climate and the preponderance of saline waters.

Above this appears the old red sandstone, in some places upwards of 3000 feet thick, in which are no corals and but few fishes and shells, which he considers to be proof that a cold northern cli-

mate then prevailed, and the structure of this great formation shews it to be marine.

Above the old red sandstone is the mountain limestone, in which the abundance of what was animated life strikes us with astonishment. We discern, for the first time, the nautilus, with much larger orthoceratites than before, accompanied with spirifera, producta, bellerophon, crinoidea, with an immense number of corals, of innumerable varieties of species, and of the greatest beauty,—the clear indications of a very hot climate, and also the prevalence of the oceanic waters.

Next in the ascending order is the millstone grit, the greater part of which is destitute of organic remains. Now, although this formation appears to be oceanic, yet there are many stems of vegetables found in it, which most probably, by some of the violent perturbations of the surface by volcanic or igneous action, have been forced into it, seeing that these stems of plants are all filled up with sea sand. A limestone bed succeeds, in which we trace scales, jaws, and teeth of many species of reptile fish, with marine or fucoid plants, which is considered by the author as a convincing proof of the gradual increasing heat of the climate during this period, and as preparing for the next most important epoch,—namely, that of the great coal formation. Here it is evident that the oceanic waters had receded from the northern hemisphere, and the surface was covered with magnificent plants, with palms, palmacites, shrubs, and arborescent ferns, with reeds in places, of thirty or forty feet in height!—and it appears the atmosphere was replete with moisture as well as the surface of the earth. Baron Humboldt considers that at this period our climate resembled the hottest part of South America, whence some of the tributaries of the great river of the Amazons flows, which he graphically describes thus:—Fresh water streams running in every direction; vegetation in places absolutely impenetrable; the moist humid atmosphere producing rapid decomposition of the vegetation, and, on the other hand, forcing it like a hot-bed, so that some shrubs grow more than twenty feet high in one year: hence we naturally account for the vast quantity of bituminous coal, which is clearly proved to be of vegetable origin.

After this period the saline waters appear to preponderate, since the stems of the plants, &c. are all filled up with sea sand; and the proofs appear complete, that the temperature was gradually growing colder, since, in the next beds, the fossils are less numerous, but they clearly indicate their marine origin.

In the ascending order he now arrives at the new red sandstone, and this he finds almost a repetition of the old red so much below it. In its sandy and frequently finely lamellated structure there is abundant proof of oceanic action, and deposition. There



are but very few fossils imbedded in it, yet small fossil fish are numerous towards the upper part of this bed: parts of the stems of trees are occasionally found, but they are completely filled up with silica. Now, as these could not have grown in the ocean, they must have become imbedded in this mass by other circumstances, probably volcanic action. The great masses of rock salt in this country are also found in this formation, which is a complete proof of its marine origin, and most probably those depositions and incrustations took place during the gradual decrease of the oceanic waters.

The author assumes that the temperature now increased in warmth, since in the lias formation, which succeeds the new red sandstone, the remains of crocodiles, ichthyosaurus, and plesiosaurus, are found for the first time, with large nautilus; and ammonites of a great variety of species, with a vast abundance of fishes covered with scales, an infinite variety of shell fish, crustacea and testacea. Corals are also abundant in this bed.

Immediately above this, in the marlstone beds, he traces the impressions of plants, most of which resemble those of the southern tropics of the present day. Again a change, and the oceanic waters preponderate. In the lower oolite the fossils are principally marine, and perhaps these lived under a colder clime; but the fossil remains are now so numerous and intermixed, that Mr. Saull cannot discover those broad and well-marked lines of distinction which he has so clearly pointed out heretofore.

The coral rag exhibits an amazing growth of corals, many of them of the species growing at the present day in tropical seas. In the upper oolite he finds evidences of a warm climate, with its corresponding fossils; the most remarkable of which are those resembling the zamia or Cycadeoidea of the present forests of Africa, with large fossil trees. Again, we arrive at fresh water and mixed beds, in one of which, the Wealden, are found the remains of the Iguanodon, so admirably described by Dr. Mantell. This amphibious reptile must have been, when at full growth, not less than eighty feet in length. Mr. Saull's museum is rich in the number of bones it contains of this most extraordinary being. There are vertebræ resembling those of a fish, more than eight inches in diameter; portions of the femur larger than those of the elephant of the present day; one immense claw, weighing nearly three pounds; and several pelvis, and metatarsal, and metacarpal bones, with many others.

In the green sand, and in the gault, he is of opinion that the climate was again cooler; but in the next beds, the chalk, the temperature unquestionably was hot; the fossils, and even the strata itself, being entirely of marine origin.

At the period of the London clay, he supposes the waters gradu-

ally retiring. Then all the valleys were tidal lakes, as evidenced by the remains, which consist of crocodile, nautilus, turtles, crustacea, and testacea; and as the hills were uncovered vegetation succeeded, consisting of plants, the seeds and fruits of which are analogous to those growing in much warmer latitudes than ours at the present day, perhaps resembling that of Southern Africa. Thence he infers that the evidence bears out or supports the conclusions at which he arrives, namely, that with the decrease of the level of the waters, the heat of the climate increased, until in the succeeding period, when the first of mammalia or hot-blooded animals appeared; these are the palæotherium, anoplotherium, chiropotherium, lophiodon, &c., mostly resembling the tapir of the present day. Again a change: the ocean returned. Marine beings innumerable are found at this epoch, with the bones of the walrus and the whale. This in regular sequence again changed. The waters receded, and we then recognise that interesting period when the huge mastodon, the noble elephant, the rhinoceros, hippopotamus, hyena, tiger, boar, bear, wolf, deer, and horse, were the inhabitants of our now northern clime\*.

I have already illustrated in this paper the change from this epoch to the present, in attempting to unravel the history of the horse.

The remarkable change of character in the British strata has for a long period attracted great attention with geologists; but no one has brought forward such an interesting and satisfactory theory as Mr. Saull. He considers also that, in astronomy, he has both an explanation and a proof of his views, that, in the northern and southern hemispheres there is an alternate increase and diminution of the waters of the earth in successive periods of 25,800 years, being those of the precession of the equinoxes, and arising from the same cause; and he has satisfactorily established the proof of the change of situation in the pole of the earth by a number of places, which have changed their latitude and longitude within the last 200 years.

It would be foreign to the subject to enter into the astronomical calculations by which Mr. Saull so easily solves enigmas that have for a long time embarrassed the geological world; for it must be confessed that they account for, and are fully equal to explain, all the geological phenomena—all the formations, all the variety of strata, all the fossil remains, and all those circumstances which are inexplicable without it.

The motions of the earth are still going on silently around us, like those that have passed; and the fair regions which we now inhabit must, in the regular course of nature, be covered again by

\* Mr. Saull's interesting museum, supposed to contain the largest private collection of fossil remains in the kingdom, is liberally opened to the public every Thursday morning at eleven o'clock: no introduction whatever is required.



the ocean. New layers of marine productions, of sand, gravel, and broken mountains, will overwhelm that soil to which we now feel such lively attachment; and, finally, new countries, or arrangements of land, will again arise in due course on those mundane sites which, at present, are occupied by civilized Europe, and by the northern parts of Asia and America.

For my own part, I see no moral evil to deplore in these changes. Nothing is effected abruptly, and man and animals are gradually warned to seek new habitations. The notices are slow, but unerring; and the human race will find fresh and renovated countries prepared for their subsistence, and abundantly fitted for their enjoyment, by these grand operations.

I have already adduced sufficient evidence that the sea has covered the land at different periods; and any one who views the interior of our country must be sensible that its swelling hills and low vallies, leading to the sea, must have been produced by the action of the oceanic waters. Volcanic agency from below has also produced many great and important changes in modifying and rearranging the surface of the earth.

We will now endeavour to apply the knowledge we have obtained to investigate farther the ancient history of the horse.

Arabia has been frequently described by natural historians, from the very superior breed of horses found there from the earliest recorded times, to be the soil that gave birth to the primitive horse. I confess that at one period I entertained a similar opinion, and indulged my fancy-flight in imagining the first pair of horses located on some verdant plain in Arabia the Happy, and bearing a strong resemblance to the war horse described so emphatically in the Book of Job: "Hast thou given the horse strength? hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength: he goeth forth to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he his back from the sword. The quiver rattleth against him, the glittering spear and the shield. He swalloweth the ground with fierceness and rage; neither believeth he that it is the sound of the trumpet. He sayeth among the trumpets, Ha, ha! and he smelleth the battle afar off, the thunder of the captains, and the shoutings."

This is a magnificent description of a war charger,—but, splendid as it is, it will equally suit the horses harnessed to the war chariot of Queen Boadicea, which spread dismay and death in the breasts of the Roman legions, when Cæsar first invaded the shores of Britain. I do not by this remark mean to throw any doubt on the superiority of the Arabian breed of horses, but merely introduce it to shew that Great Britain also possessed a very superior breed at



this early period. We have already seen that they existed on our island long before man was created ; and the probability is, that the breed which the ancient Britons then possessed were descendants of the olden race,—modified greatly, of course, in consequence of the change of climate which had gradually taken place during an immense period of time. Whether the peninsula of Arabia possessed horses, at the epoch to which our history refers, which we are certain that our country did, we have not the means of clearly ascertaining ; the probability is, that she did not. We find Arabia to be an elevated table land, sloping on the north gently towards the Syrian desert, and encircled along the sea coast with a belt of flat sandy ground. The soil of this flat country, from its regular inclination towards the sea, as well as from the large beds of salt and marine exuviae with which it is interspersed, appears to have been at no great geological period a part of the bed of the ocean. This flat country produces the principal pasturage, and contains rich groves of dates and other fruits. The interior of the country is chiefly burning sandy deserts, lying under a sky almost perpetually without clouds, and stretching into immense and boundless plains, where the eye meets nothing but the uniform horizon of a wild and dreary waste.

It is observed, that the sea, particularly on its western coast, still continues to recede. The reefs of madrepore and coral which abound in the Arabian Gulf, and in some parts rise several fathoms above the sea, are increasing and coming nearer the shore. Thus this flat fertile part of the country is constantly extending its limits. Muza is mentioned by Arrian as a sea-port of Arabia Felix ; we now find it at a distance of several miles from the sea. In the southern part of the Arabian Gulf the sea is also receding from the land.

From these facts we come to the conclusion, that, at the period when horses were freely ranging throughout the continent of Europe, the present flat fertile land of Arabia, if not the whole peninsula, was covered with sea ; and it appears altogether absurd to suppose that Nature would have placed her first-born pair of horses on such a desolate and sandy soil, even if it were not so.

That Great Britain was once connected with France there can scarcely be a doubt. The nature of the cliffs, similarity of strata, and other circumstances, sufficiently prove this ; and all tends to increase the opinion, that Great Britain has as good a right to be considered as the primæval birth-place of this noble animal as any other country on the globe. It is true, that the present state of our knowledge is not such as to warrant us in coming to any certainty on the subject, but, on the whole, I consider it to be very probable.

The earliest historical account of the horse comes from Arabia. The author of the Book of Job is supposed by Dr. Hales to have lived 184 years before the birth of Abraham. The scene of the

poem is laid in the land of Uz, which Bishop Lowth has shewn to be Idumea. The Arabs also themselves trace the genealogy of their Nedjyds up to the time of Abraham; and when we consider the almost religious zeal with which the preservation of their pedigrees has ever been regarded, and the rigorous enactments which have been resorted to in order to preserve the purity of their breed, we certainly must give them some credit for their statement.

The Nedjyd breed, so serviceable in the cause of Islam, is supposed by the Arabs to have obtained, through Mahomet, the prophet of God, an occult capacity to read or repeat, tacitly, every day some verses of the Koran. It was one of their old proverbs—that, after man, the most eminent creature is the horse—the best employment is that of rearing it—the most delightful posture is that of sitting on its back—the most meritorious of domestic actions is that of feeding it; and they were taught by the Prophet to believe that it was originally predestined for their special service. “When God,” said he, “wished to create it, he called the south wind, and said, ‘I desire to draw from out of thee a new being. Condense thyself, by parting with fluidity:’ and he was obeyed. He then took a handful of the element, now become tangible, and blew upon it, and the horse was produced. ‘Thou shalt be for man,’ said the Lord, ‘a source of happiness and wealth; he will render himself illustrious by ascending thee.’”

To those who delight to study man in his pastoral simplicity—to moralize on the destiny of nations, or the rise and fall of empires—the history of Arabia cannot fail to be attractive. From time immemorial it has been celebrated for its precious productions, and distinguished as the home of liberty and independence; and the only land in all antiquity that never bowed to the yoke of a foreign conqueror.

The history of antiquity is not without traces of the early influence of the Arabs on the condition of neighbouring nations. The Book of Genesis mentions Nimrod as the founder of the Babylonian empire, and we think we recognise in the mighty hunter an Arabian chieftain, like the modern sheiks of the Bedouins.

To the Arabian, principally, England is indebted for her improved and unrivalled breed of horses for the turf, the field, and the road; and it is in consequence of their very superior qualities that the honour has been given to Arabia, as being the country that cradled the first-born courser. But the superiority of the breed may be easily accounted for without this. The singular local situation of the country, the inequalities in the nature of the soil and climate, and the peculiar method and religious care with which the horse is reared there, are alone sufficient to account for their very peculiar organization.

The same observations will apply to their human population,



being one of the most ancient people in the world, and, like their horses, having a physiognomy and character which are quite peculiar, and which distinguishes them generally from those which belong to the other parts of the globe. Their manners still present that mixture of rude freedom and patriarchal simplicity which we find in the infancy of society; and in the portraits of the modern Bedouins we may trace the features of their ancestors, who, in the age of Abraham or Mahomet, dwelt under similar tents, and conducted their horses to the same springs and the same pasturage.

There is a very important and interesting argument which presents itself from this geological inquiry, and which may be very properly considered as the theological history of the horse. It is very generally believed, that, previous to the fall of man, death was not known in the world, and consequently the brute creation must have suffered a change in their nature and instincts since that time. Thus we read in Milton—

“Of man's first disobedience, and the fruit  
Of that forbidden tree, whose mortal taste  
Brought death into the world, and all our woe.”

And again—

“Discord, first  
Daughter of Sin, among th' irrational  
Death introduced through fierce antipathy:  
Beast now with beast 'gan war, and fowl with fowl,  
And fish with fish; to graze the herb, all leaving,  
Devoured each other.”

It certainly can scarcely require any argument to repudiate such ridiculous nonsense: Milton was a beautiful poet, but a very bad theologian; and I should not have noticed the subject here, had not those opinions been but lately introduced to the world sanctioned by the highest authority. I allude to the Rev. Wm. Kirby's *Bridgewater Treatise*, and the Rev. John Styles's splendid nonsense, which obtained the prize of *one hundred guineas for the best Essay on the obligations of humanity as due to the brute creation*.

Both these authors are of opinion that the different orders of animals originated in one quarter of the globe, and from which they subsequently spread themselves, according to circumstances, over the rest of the surface; and to support this argument, they alter the natural instinct of the greater part of them. The ferocious hyæna, the savage lion, the treacherous tiger, and the whole race of carnivorous animals, are turned into herbivorous and ruminating beasts!

I need scarcely tell you, that those opinions are as much opposed to theology as they are to philosophy, since the sacred writings give no sanction for the belief that animals were included in the sentence of death pronounced upon the fall of man.



No one, who attributes the origin of the world to the power and fiat of the Almighty, can fail to admit that all natural phenomena, and the laws that regulate the material universe, are manifestations of the will of the same Creator; "fire and hail, snow and vapours, wind and storm fulfilling his word; mountains and all cedars, beasts and all cattle, worms and feathered fowls." No consistent believer, therefore, should be apprehensive of any discrepancy between those unwritten manifestations of his power and godhead, and the written revelation he has vouchsafed to us in his holy word. The same universal law which now governs our planet and its innumerable inhabitants, ruled when they were first created—when angels' harps rolled their deep notes over our world, as it sprung forth in its young and peerless beauty from the hands of the Deity. On every hand were exhibited the bright evidences of its Maker's mysterious power, then, as now; and all the functions of life, and all the orders of animated existences, obeyed their Creator's fiat. The finger which first gave to them their unalterable law has never touched them since: they have never had but one principle to govern them—one law to guide.

There cannot be a doubt, then, that the instincts and habits of the inferior animals have never been altered, and that they were all created in their different localities, on soils and in climates well and wisely adapted to their various constitutions.

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### QUESTIONS RELATIVE TO THE PRESENT EPIDEMIC AMONG CATTLE.

1. Locality?
2. Soil, pasture, and previous feeding?
3. First appearance of the Epidemic?
4. State of the weather?
5. Had these cattle any communication with other stock?
6. Did they travel along the road on which infected animals had travelled?
7. Did any servant, or other person, that had attended on other diseased animals, come in contact with these animals?
8. What is your opinion as to the infectious or contagious quality of this disease? Very particular and full here.
9. What were the earliest symptoms? Did it appear primarily in the feet or mouth?
10. Describe the gradual progress.
11. Treatment, particularly the questions of Bleeding and Physic.
12. Duration of disease?
13. Number of patients, and result?
14. Number of diseased animals in your neighbourhood, and general result?
15. What alteration took place in the milk?
16. How far did the condition of the animal, or his age, influence the complaint?
17. Had it connexion with other diseases?
18. Did it much influence the after-condition of the animal?
19. Has the disease appeared a second time in the same animal, and with what degree of intensity, and what result?

## OBSERVATIONS ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Mr. W. S. WALLIS, V.S., Halstead.*

My dear Sir,—I CANNOT but feel flattered by your application, and shall be happy at any time to communicate the little information I may possess upon veterinary subjects or practice. With regard, however, to the policy of your publishing an account of the most approved successful treatment of *this* or any other disease as adopted by the profession, I must confess I have my scruples, for which you will give me credit. It may be safe and politic for some few individuals to make known their treatment of disease in general or particular, but for persons devoting themselves to laborious country practice, which seldom secures any thing beyond a very moderate income, and often a bare bread-and-cheese competency, to furnish their employers with an account of the remedies to which they resort for the relief and cure of their patients, would, I think, be not only injudicious and unnecessary, but highly impolitic and injurious.

It is very probable that our brethren in town cannot fully appreciate the difficulties we feel, which arise from the information agriculturists have derived from works already extant on veterinary subjects. Not that I have a word to say against those who have written for the public; but, on the contrary, I think that they have done right, and, inasmuch as thereby they have contributed to the advancement of science and of the profession, they deserve and have my thanks, and no one, Sir, is more worthy of them than yourself; but still I am of opinion that it would not be right or honest towards ourselves, to place the knowledge we have acquired by an early and expensive education and subsequent experience, in the hands of those on whom we depend for support, and who would naturally avail themselves of such liberality, to our exclusion. However, here I will leave the matter, assured that you will not do any thing that you deem likely in the least to infringe upon the interests of the profession, and hoping that you will favour me with your opinion respecting the above objections, and the course they suggest.

Now, then, I will endeavour to answer your questions in their order.

1. It has prevailed here in all situations. The neighbourhood is hilly, and generally considered healthy.

2. On almost every variety of soil, pasture, and previous feeding.

3. In May. I had, however, *one* case in March.

4. Cold, damp, and for the most part windy.

5. In many instances they had.

6. No; except in one or two cases.

7. No.

8. It is both infectious and contagious. As to the former, in one yard it began with the milch cow, and spread through all the stock, save the horses, which I have not yet known to take the disease. Now, the bullocks that were here tied up in the house could have no communication, but through the air, with the other cattle which were in the yard adjoining.

In the cows, the head was chiefly and alone affected, while in the bullocks—tied up—the feet were primarily and throughout the seat of the disease. The mouths, however, were sore. I could adduce many such instances. It seems that the air does not carry the infection to any great distance—at least in all directions. It has been very common that cattle on an adjoining farm, separated only by a distance of a few rods, escape. One instance I specially refer to, where a dozen bullocks, tied up in the house, were attacked, and within fifty rods were large quantities of stock, and not one took the disease till within the last month, constituting an interval of six months. The disease has been frequently carried from one yard to another by driving cows to bull, on one side or the other. Those which are tied, as well as those compelled to travel on the road, have generally suffered most with the feet, while such as have been running loose in a yard have been rarely so affected.

As to its being contagious, I have little more to say that can be considered to bear upon this point, viz., its uniformly spreading through all the stock placed within a certain limit; the uniformity of the symptoms developed in those placed in contact with each other and in like circumstances; and, lastly, I would mention that, on one or two individuals in this neighbourhood having had their hands abraded in salting the mouths of the animals, small pustules have formed on the arms and face. I know that these are mere inferences, and unsatisfactory ones too; but as I have nothing at present more conclusive to present in support of my opinion, I must leave it, in the hope that you will obtain from other quarters better evidence on the subject.

9. First; increased secretion of saliva—vesication on the tongue and buccal membrane of the mouth, and, of course, great tenderness and consequent inability to eat, or rather, perhaps, fear of eating. Hence the animal looks very thin, and is sometimes tucked up from constitutional excitement. The coat stares, the eyes are sunk, and sometimes (this was more commonly the case in the early part of



the summer when it first appeared here) the febrile symptoms run high.

Secondly; I really cannot say, having seen it reversed in so many different animals.

10. I have said that in many it first discovered itself by an increased secretion of saliva, vesicles on the tongue, and often much febrile excitement. Commonly the discharge of saliva increases until about the third or fourth day, as does the number and size of the vesicles, and also the febrile symptoms, of which the pulse is characteristic, ranging, in mild cases, from 50 to 60, but in many others from that to 100. In like manner, we have in some a weak pulse, which indicates any thing but venesection; but in others (especially in the early part of the summer) we had a bounding and rapid pulse, in which cases early depletion was resorted to with evident success. Indeed, so high did the febrile excitement run, and so bounding and rapid was the pulse in the animals first attacked in this neighbourhood, that, with but few exceptions, I had recourse to venesection. More recently, the disease seems to have assumed a different character, typhoid symptoms, &c., and I have pursued almost an opposite course, with nearly uniform success; namely, by supporting the animal with plenty of food of a mild character, and the administration of stimulants and tonics.

Two died in the early part of the summer, being the first that had the disease here (except one, as I have already stated, that was attacked in March). They had been ill several days before I saw them. One was bled and the other not.

The post-mortem appearances closely resembled those presented in animals that have died under bronchitis. The bronchial tubes were filled with frothy mucus, and the poor beasts died from suffocation. In these cases the primary symptoms became aggravated, the tongue assumed a gangrenous appearance, the breath was very offensive, the respiration became very laborious, and then followed exhaustion, suffocation, and death. But, as these are the only cases that have terminated fatally in my practice, my experience in the post-mortem appearances is necessarily limited.

11. I have above referred to venesection. As to aperients, I have not had recourse to them in half-a-dozen instances, and never without the state of the bowels requiring it, which you will perceive has not been commonly the case with my patients. Febrifuge medicines have, and in the early stages particularly, been productive of most service. As to the vesicles on the gums and the ulcerations on the feet, the treatment would differ little from that of "thrush in the mouth," or "foul in the foot." Of course, I have no objection to stronger applications to the feet or mouth if necessary.

12. As I have stated, the disease generally reached its height about the third or fourth day, and the animals were dismissed about the seventh or eighth: lately, however, the disease assuming a much milder form, they have seldom been under treatment more than three or four days.

13. Three hundred, as nearly as I can calculate. Two deaths.

14. I cannot tell: many hundreds, if not thousands. Few deaths.

15. Nothing particular, except that it became poorer or thinner, as it does often when cows are drying; and this was the case in proportion as the quantity was diminished.

16. I should say, just as such circumstances influence other diseases. Of course, old animals in low condition could not withstand it so well as younger ones in ordinary condition. Again, fat and heavy bullocks suffered more with their feet, and *cows just calved or in full milk* were more susceptible of fever, inflammation of the udder, &c.: I think the *latter* suffer most from the disease.

17. Not that I could discover.

18. When it first broke out here, it did for some little time; but within the last month or two the animals have lost very little flesh, and have in almost all cases begun to thrive from the third or fourth day.

19. Not in any case. The cow already mentioned as having had the disease in March, was then and for some time after alone; but during the summer the owner bought in more stock, and these have lately been attacked, but although the cow has been constantly with them she has escaped.

One word more as to treatment. If the weather is favourable, I do not remove the animals from the yard; but I have generally shut them in moderately warm places. The diet, grass, hay, and bran, mixed with linseed cake powdered and scalded; if very bad, with gruel.

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## OBSERVATIONS ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Mr. HENRY LEPPER, V.S., Aylesbury.*

No. 1. AYLESBURY, in Buckinghamshire.

No. 2. The soil is various, but principally a rich mould of a dark colour on a subsoil of stiff clay, particularly throughout the low part of the vale, which abounds with exceedingly rich pasture, probably surpassed by none in this our great agricultural country.

In other parts, where the soil is less rich, the subsoil is hard sand-stone, and in some places coarse gravel. Near the Chiltern Hills the soil is less productive, being of a kind of chalkish clay, below which chalk and chalk-stone abound. The cows, during their time of lactescence, are liberally supplied with hay twice in the day, throughout the winter months. They are turned to pasture both day and night the whole year, and are put into cow-houses or sheds morning and evening, for the purpose of being milked. When they are allowed hay at the season above stated, they remain long enough—from two to three hours—to fill themselves. A great number of oxen are fattened by grass only, and sent to Smithfield about Michaelmas: those intended for Christmas are taken about this time (Michaelmas) into houses, and profusely fed on the best selected hay and oil-cake.

No. 3. The first case which came under my own observation was in the month of February, 1840. I heard of one farmer having the disease among his cows as far back as Nov. 1839. I did not see them, and, of course, cannot answer for the accuracy of the report.

No. 4. The weather had been exceedingly wet from July 1839 to March 1840, and the land so completely sodden, that it was with great difficulty the beasts could walk on it in many situations.

No. 5. Yes. Mr. Tomlin, of Rousham, the proprietor of 32 head of cattle, 28 milking cows, 2 stirks, and 2 bulls, all of which had the epizootic disease. I first saw them on the 16th of Feb. 1840. One had died on the 15th; another I directed to be immediately killed on account of the miserable state in which it was; four died afterwards, and many very slowly recovered. Mr. Tomlin states as his opinion, that he brought the disease to his own cows by purchasing two heifers about ten days previous to its outbreak: but this is very doubtful, as neither of those heifers were, apparently, affected by the disease until a day or two after his cows shewed symptoms of it. A Mr. Cox, of Scot's Grove, who, perhaps, has had more cases of disease than any one in this county, affirms that he introduced the complaint among his cattle by purchasing some barren cows with the disease on them. About forty had the disease at the time I saw them, which was on the 25th of Feb. last.

No. 6. No, in the first case—Mr. Tomlin's. The second—Mr. Cox's—is doubtful: they might have done.

No. 7. No.

No. 8. I am of opinion that it is a contagious disease, although it may be difficult for me to give the why and the wherefore. I have attended cattle affected with the disease, the property of fifty-two persons; out of which number about fifteen or twenty posi-



tively affirm that they brought the disease to their stock by purchasing heifers, many of which were bought at the fairs at Leighton Buzzard, in Bedfordshire, and at Winslow, in Buckinghamshire. Nearly the whole of the beasts that were purchased at Bristol fair, *in the month of April last*, either came home with the disease on them, or fell ill with it in a very few days after their being safe in the possession of their new owners. There are many instances on record which, I think, go a great way to prove that it is contagious. I will name Mr. Denchfield, of Lodge Hill farm, in the parish of Waddesden, who had about forty cattle with the disease in May last: the wind at that time was continually from the east, north-east, or south-east. On the windward of the affected cows, in an adjoining field, were eight other cows heavy in calf. Mr. D. remarked that there was something very singular about this, inasmuch as those cows escaped the disease for nearly a fortnight after the whole of his other cattle had it. As soon, however, as they commenced calving, and, for the convenience of being milked were regularly taken to the places to which the sick had been removed, they as regularly became diseased from the third to the fifth day after visiting their new quarters. To go back to numbers, twelve or fourteen persons out of the fifty-two admit the probability of their cattle having travelled on the road after diseased animals. The remainder cannot account in any way how their beasts became affected.

No. 9. A watery eye; slight erection of the hair; horns and feet alternately hot and cold (the latter most frequent). Pulse a little accelerated, about 70 or 75; continual shifting of the limbs, and shaking of the feet as though attempting to rid them of some foreign body.

No. 10. In the course of a few hours the cutis is raised in the form of vesicles; at the point and dorsum of the tongue, on the gum of the upper jaw, at that part which approximates to the incisors of the lower jaw, around the alæ of the nose, and at the point; on the sides, and at the puncta of the papillæ, raising the whole of that portion of dense cutis which forms the connecting medium. There is a constant flow of saliva; inability to feed, and disinclination to rise. The secretion of the milk is diminished, and, in some cases, entirely suspended. The bowels variously affected: in some cases they are relaxed, in others constipated, and in many they are in their natural state, the fæces being occasionally of rather a darker colour.

The blisters soon burst, and sloughing commences, *generally, in the mouth first*, which is completed on the second or third day of its attack. On or about the third day the parts are less tender; the animal begins feeding, particularly if supplied with

soft food. Vesicles appear on the teats of those animals only which are giving milk, or very near their period of gestation; and, in consequence of the extreme irritation kept up by the hand of the milker, very painful and troublesome ulcers are produced, particularly at the puncture, where the consequent inflammation and thickening entirely excludes the possibility of getting away the milk, and *mammitis—garget*—is the result, with the final loss of one or more quarters of the mamma, and, in some instances, the loss of the cow. Fortunately, the latter is not a very common termination.

No 11. In the spring of the year I usually abstracted blood, particular if I saw the case in its primary stage. As the summer advanced, and cases becoming more numerous, affording me opportunities of watching its progress, I bled less frequently. The inflammatory stage being of so short a duration, combined with comparative starvation, I very much question if we are warranted in bleeding in ordinary cases.

I commenced by giving aperients conjoined with carminatives. I still continue to do so, and I find no reason why I should relinquish it. In bad cases I am particular in following the case up with vegetable tonics, aromatics, and, occasionally, opiates, as the state of the animals may require.

No 12. I find if the mouth is extremely affected the feet suffer much less, and the animal recovers more quickly, every untoward appearance passing off in about twelve or fourteen days. If the mouth is slightly affected, the feet are generally much worse, and, in numerous instances, the whole of the horny sole separates, consequently the lameness continues a very considerable time, until a new sole forms, when the use of the drawing-knife is required for the purpose of removing any remains of the sole.

In other more unfavourable cases, inflammation extends to the deeper-seated cellular tissue, and considerable sloughing takes place between and in front of the hoofs, and, occasionally, the ligaments are not exempt. When this is the case, a fever of a typhoid character, and to an alarming extent, commences, and numerous abscesses—purulent abscesses—form about the joints, particularly the knees, stifle, and hip-joints, and, finally, death closes the scene.

No. 13. I have attended nine hundred patients, out of which fourteen have been lost. One was ordered to be killed on my first visiting the yard, in consequence of its inability to rise, from inflammation, &c., in the feet, which had been attacked five days previous. It was in condition for the butcher. I likewise ordered three others to be killed, having bronchitis, pneumonia, and their consequences, produced by the improper administration of medi-

cine by the farmers or their servants; and, particularly, by their keeping up the head of the animal while he was in the act of coughing. Instances of this are not unfrequent. Two died between the third and fourth week, from attacks of ascites. Three died of bronchial inflammation, from the want of care in giving medicine, as above stated; and five died of exhaustion, consequent on typhus fever, extensive abscesses, &c.

No. 14. I suppose about three thousand; certainly, quite as many, taking those included in a circle of about nine miles from the town of Aylesbury. The loss I imagine to be less than two per cent. As the disease progressed, it, like all other epidemic or epizootic diseases, lost, to a certain extent, its severe characters, particularly in the warm and dry summer and autumn season, at which time many hundreds recovered with little or no treatment. Since, however, the wet season commenced, it has been a little more severe. Lameness is more frequent and troublesome in wet weather than in dry, in consequence of dirt insinuating itself between the old separating sole and the newly formed one. I also find moisture to the feet conducive to separation as well also as to suppuration.

No. 15. The milk, although diminished in quantity to an alarming extent as concerns the dairyman, is certainly not deteriorated in quality. We may almost say that it is improved. It has a richer taste, and yields more cream and butter in a given quantity. Its chemical property I am not able to speak of; but it seems that the greater falling off is in its aqueous portion.

No. 16. The disease was not influenced either by age, sex, or condition. Any thing which tended to debilitate the system, such as crowding them in ill-ventilated situations, long drifts, standing in fairs or markets, &c., appeared to predispose them more readily to take on the disease.

No. 17. None whatever.

No. 18. It was remarked, that those animals which quickly recovered (as did the great majority of them) were improved in their condition, assuming a healthy appearance, and readily accumulating fat. The major part of the cows giving milk did not again secrete their former liberal quantity, nor will they until they have yielded another calf.

Those beasts that have lately been attacked do not so readily resume their previous healthy appearance as did others in the warm and dry season.

No. 19. In no instance have I observed the same animal visited a second time with the disease. I have frequently heard of their being attacked a second time, but on making strict inquiry it has invariably been erroneous.



In addition to my very irregular replies to your questions, probably the following may not be considered superfluous or unnecessary information from my case-book.

## EPIZOOTIC DISEASES.

Months.	No.	Bled.	Cows.	Oxen.	Sturks	Deaths	Killed.
February .....	72	42	70	—	2	4	{ 1 inflamed feet 3 exhaustion
March .....	114	72	114	—	—	1	ascites
April.....	72	54	46	26	—	1	ascites
May .....	57	27	47	—	10	2	bronchitis
June.....	76	10	50	19	7	—	—————
July .....	—	—	—	—	—	—	—————
August.....	—	—	—	—	—	—	—————
September....	192	28	167	4	21	3	{ 2 bronchitis 1 exhaustion
October .....	289	17	207	51	31	—	—————
November....	41	2	27	6	8	3	bronchitis
December.....	2	—	2	—	—	—	—————
Total	915	252	730	106	79	14	

OBSERVATIONS ON THE PRESENT EPIDEMIC  
AMONG CATTLE.

*By Mr. GEORGE HOLMES, V.S. Thirsk, Yorkshire.*

Dear Sir,—HAVING duly received your circular, it is with no small degree of pleasure that I now transmit you my mite of professional practice and observation respecting the present prevailing epidemic. In the first place, however, I do most sincerely hope, that the steps taken in requesting the general and individual opinions of the profession upon this very important subject will elicit such an amount of useful information as may possibly ultimately tend to satisfactory results, whereby not only the profession, but also at the same time the country in general, may be considerably benefitted.

My being situated in a thickly inhabited breeding and grazing district has afforded me abundant opportunity of observing the disease under a great variety of attendant circumstances, in all their various stages of progress.

The first time that the epidemic made its appearance in this immediate neighbourhood was about the middle of last June, when it manifested itself among two or three herds, and was, to the best of my belief, confined to them alone.

*The symptoms* were but slight: there was lameness, accompanied by a little frothing at the mouth, but no breaking out at the feet.

Nothing farther was heard of the disorder, as regards its spreading, until about a month afterwards, or the 18th of July following, at which time a fair was held at the village of Sopcliffe, about five miles south west of this place, where it shewed all its baneful symptoms among some lots of Irish stock that were at the fair.

These Irish stock have, by common consent, been considered as the introducers of the epidemic into the Yorkshire Ridings; and from that period to the present the contagion has, more or less, been rapidly spreading through every park and pasture in the three Ridings. Such were the first effects, that a complete and total stagnation of the sale of any kind of Irish-bred stock took place; for buyers of such were about as scarce as Queen Anne's farthings, or, in other words, not to be then found.

From the number of cases that I have professionally attended and casually heard of and seen, no state or condition,—no situation or locality—has protected the poor cattle from the sickening hand of the insidious foe; for there might be seen labouring under its clutches, the poor, the middle or tolerably conditioned, and the fat: some in the field, feeding upon turnips and grass; some in the straw-yard living upon turnips and straw; and others that were tied up in the house and fed with turnips, mashes, hay, &c.

Among many of the latter class was the milch cow, that had not been for upwards of six weeks previously in company with other cattle. Here I must beg to observe, that I have attended stock of this latter description (that is, the milch cow), that had never been out at all from the stall, and, therefore, could not be said, strictly speaking, to have received the infection by touch or direct communication from the infected; and, although their well-sheltered and protected situation seemingly promised a barrier to the enemy, yet, strange to say, they—the sheltered and protected—were, in many instances, among the first that exhibited symptoms of the complaint. Sometimes the very reverse has happened: in fact, as before observed, that, as nothing could completely stop the progress of the disease, so nothing—old or young—fat or lean—in warmth or cold—has victoriously resisted its influence. I have even had calves of a fortnight old, and younger, as much, and, in degree, as violently affected as their dams or parents. Yet, nevertheless, I have found warmth of very great benefit to such as were labouring under the disorder; and also the too free exposure of the sick, as practised by some, very prejudicial. Experience has indubitably proved to my satisfaction, that such stock as were labouring under the influence of the present epidemic,

when too freely exposed to the cold, generally lost a great weight of flesh, beside having the complaint under much worse circumstances.

*The general symptoms* that I have observed since the first appearance of the epidemic, are, a staring coat—the eye a little sunken in the orbit of the head—large blisters arising on the base of the tongue, and containing a white kind of serous fluid and the blisters sometimes extending from the base to the tip of the tongue—the front teeth of some very loose—a great discharge of saliva from the mouth, and, in bad cases, a jelly-like fluid instead of saliva—tenderness on the skin and back when touched, so much so, that a common observer would say that some one had been beating them severely with a stick; and, if compelled to walk, they appeared as walking on stilts. They very much resembled a horse labouring under an attack of laminitis. The pulse from 60 to 70, but weak—a pulse which indicates a great deal of irritation, but not of inflammation.

I have never, as yet, seen a case that would warrant me in bleeding either fat or lean stock. It does not seem to me that one organ alone is attacked, but every organ, more or less. The mucous membranes appear to be particularly so. I have sometimes gone into a field among a number of stock, and have pointed out some as the next most likely to be invalided. They did not then either evince lameness or shew any discharge from the mouth, yet their apparently starved and chilly looks convinced me that they were infected, and the correctness of my judgment was not long in doubt, for all the other symptoms shortly afterwards rapidly developed themselves.

Some would be quietly chewing the cud in an apparently good state of health, and yet, scarcely half an hour afterwards would shew all the peculiar characteristic features of the complaint.

I believe that lameness generally accompanies the rising of the blisters in the mouth; at least my experience hitherto has shewn so.

The precise and exact cause of the disease seems to me wrapped in so much speculative doubt and mystery, that I scarcely dare venture to hazard an opinion; yet, after revolving the matter over and over again, and then unbiassedly canvassing the sentiments of others, I am inclined to think that it is a constitutional derangement of the system, produced, under predisposing circumstances, by an atmospheric influence of some (at present to me unknown) gaseous fluid, that seems to have a peculiar effect upon the animal system in general.

A friend of mine gave me a long and elaborate account of its commencing in Spain, in 1838, and proceeding thence to Switzerland, Hungary, Bohemia, Prussia, Holland, Belgium,



France, and then to England. The prevailing symptoms in those countries were in many instances of a similar character with those attendant upon the disease in this country; but sometimes they were considerably more intense and fatal. I believe the disease shewed itself with a greater degree of virulence in Holland than in any other country. It also seems to have passed over from France hither by means of the channel intercourse into the southern counties, and so along by the western districts, until every district has been more or less visited.

A wet and damp state of atmosphere seems to favour the disease, while a clear frost appears to operate reversely. A week's continuance of fine clear frosty weather almost cleared us of the nuisance, when a return of moist and warm weather again rapidly multiplied new cases. As yet, I have not heard of or seen a second attack, neither do I suppose the thing likely to happen.

That the disease is contagious there is not the least doubt; for no sooner has an infected beast been driven near or associated with others, than he has speedily shewed symptoms of bodily ailment. Such instances, if necessary, shall be given; but considering them superfluous, I have omitted them altogether.

I have also known it appear among stock that had had for months no visible direct communication with the infected, nor even with other cattle, and among others that had never been nearer strange stock than been pastured in a road-side field, where the infected might probably pass. As soon as the disease made its appearance upon a farm, it spread like wildfire over most or all of the adjoining ones; and yet, at the same time, there was no apparently direct communication with the infected, and which were also generally removed, as soon as the disease was observed, to a place where the others could not possibly have any access. From this, probably, may be deduced a not very unreasonable inference; viz, that in the present case, as in human ills, there seems to be an atmospheric agent wafting abroad the effluvia or seeds of disease and death.

I have seen a whole fold of pigs take the disease before it was in the least manifested among other stock. The symptoms in the pigs were very much the same as with beasts or horned cattle. The disease among pigs has not been so very fatal here as more northward, where several farmers have lost their whole stock.

Sheep appear to me to have suffered much more considerably than cattle; but this I attribute to their generally exposed state.

I have recently heard of a person near York, that lost eleven young calves about one day or so after calving;—of another, who lost four; and a third, who lost six in the same way. All the cows had had the disease previous to calving, but had recovered before

the dropping of the calf. These cases not being under my notice, I am unable to state the treatment. The fatality of the calves appears to me to have been caused by the fœtus having imbibed the seeds of the disease in that state, when almost every ailment of the dam is generally productive of ill consequences to their then weak and imperfectly formed young.

My treatment of such cows as I have been professionally called to attend upon has been quite simple:—viz., the combination of tonics with aperients, which I have always found to have the desired effect. I am no advocate of the strong drastic purges that are sometimes imprudently given; for I feel persuaded that more harm than good is the result of their use, as they (i. e. the sick stock) are generally found labouring under great debility. Under such circumstances, violent purging medicine would have a much more severe effect than in ordinary cases of sickness.

I have not, as yet, lost any of my patients since the commencement of the disorder; and neither have I heard of any, except in those cases where the strong drastic purge has been given, and the animals afterwards left exposed to the cold. In consequence of few fatal cases occurring in this neighbourhood, the farmers treat the matter lightly, seldom doing or giving any thing to their lean stock, except washing out their mouths with an astringent lotion, and then leaving them to chance or the care of a more benevolent providence.

When fat cattle or milch cows take the disorder, and the former especially, they generally lose a great deal of flesh, and the latter their milk. If an aperient, as already recommended, is given, the loss of either may, in a great measure, be prevented. Perhaps the fat cattle will not lose more than ten pounds, or a stone at the utmost: while, if left to mere chance, the odds are, that they would go near to lose ten stone; this, however, is meant as regards bad or extreme cases. The results from the negligence of the owner or manager are yet more serious. Even among such as appear quite left to fate, it may possibly happen, that some will have the complaint very mildly. The administration of proper medicine, in conjunction with proper care, as circumstances require, will generally recover the animals in three or four days, whereas, the same beast, if left to mere chance and casual circumstances, will probably be a fortnight or three weeks before convalescence.

I have seen the milk of a cow that had the epidemic curdle when boiled; in others, not the slightest difference was apparently observable. I have heard of a few individuals who evinced symptoms something similar to what animals in the epidemic shewed, from partaking of the milk; and I know of others that partook of

the same with impunity. The difference seems to me to consist in the predisposition of the constitution of the individuals to the disease, as well as the severity of the disorder of the animal from whom the milk is drawn. For my own part, I have generally recommended that the milk of such cows as were infected should not be used until five or six days have elapsed after convalescence, when the healthy quality of the milk will have returned. I have known pigs shew symptoms of the disease ten hours after taking the infected milk. I have also known it given to dogs and cats that experienced not the slightest visible ill effect. To a foal of mine, the milk of infected cows was given for about a week, and no bad result was afterwards in any degree exhibited.

P.S.—I have just heard of several fatal cases in Westmoreland. One individual there has lost ten head of stock; whence it would appear that the fatality there is much greater than here. Not knowing the treatment, I am unable to state it.

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## OBSERVATIONS ON THE PRESENT EPIDEMIC AMONG HORSES.

*By Mr. W. WOTTON, Tiverton.*

My dear Sir,—I BEG to acknowledge the receipt of your printed letter with the queries attached, respecting the prevailing epidemic among horses, &c., and will endeavour to render such assistance towards the general good as my humble capacity will permit.

The Influenza respecting which you inquire has hitherto been confined to the *horse* in my neighbourhood. I have not heard of one instance of its appearance in cattle, sheep, or swine; but its effects have been felt among the horses far and near.

It is by no means a general case that, because the disease shews itself in a large stable, all the horses in it shall become infected; for in several instances that have come under my observation, it has attacked these animals almost in alternate stalls, and the others have not been affected by it. In one case, in a five-stalled stable, the middle horse escaped it, and the others, on each side, suffered from it in the most virulent form: thus shewing, though the stable must have been impregnated with the aerial poison, an extraordinary instance of the total absence of susceptibility or predisposition.

The disease has not been confined to stable horses alone, but has attacked horses at grass, and colts that are kept from all communication with others; in fact, carriage horses, hacks, farm-horses, and colts, have suffered indiscriminately.



The first appearance of it in this vicinity was about the middle of September. The weather was generally wet, the atmosphere close, and (to use a provincialism) "muggy," and has continued so up to the last week, when the frost set in, since which time the disease has rapidly diminished, and leaves me now with a solitary case of influenza.

In some cases, I believe the epidemic has been communicated by actual contact; in others, from horses having been put into the same stall or stable with infected ones; but in a variety of cases—I may say in a majority of them—it has arisen spontaneously, that is, from the inhalation of the atmospheric poison without communication or contact.

The early symptoms are, loss of appetite—soreness and increased heat of the legs—a defluxion from the eyes, the lids of which rapidly become swollen, so much so, that in many cases the serous deposit actually forces up and inverts the conjunctiva—drooping of the head—difficult respiration, with evident obstruction in the frontal sinuses—great œdema of the legs—a small tremulous pulse—an unwillingness to move—and the position in standing is very similar to a horse in tetanus.

These symptoms gradually become more evident and intense until the fourth or fifth day, which is the crisis of the attack, and then they require redoubled attention.

The treatment which I first adopted I have scarcely altered, as I found it answer exceedingly well; and I am happy to say, that, out of nearly 150 cases, I have not lost a single horse. I have avoided bleeding, because, in those cases in which it has been resorted to previous to my being called in, the patients have not gone on so well. I have given those mingled diaphoretic and sedative medicines which we are accustomed to administer in the usual pneumonic affections accompanied by debility, to which the horse is subject. Digitalis has never been forgotten when the state of the pulse demanded it. The diet—scalded oats, with bran, or whatever else the horse could be tempted with. Purgatives were carefully avoided. Sometimes there occurred a spontaneous diarrhœa, the consequences of which would be much to be feared if neglected, on account of the previous debilitated condition of the animal.

I do not conceive that age or condition alter the appearances or effects of the disease; for I have seen horses in the best condition with as great prostration of strength, in three hours, as those that are proportionately poor.

When the disease has disappeared, there is debility for a week or ten days, during which they require tonic medicine. After this they resume their work without inconvenience.

I have never seen the disease appear a second time in the same animal.

If, Sir, these desultory remarks are of any service toward the end you have in view, it will give me great pleasure.

I am, &c.

## ON CLIPPING THE HORSE, AND THE EFFECT OF OPIUM AND HYDROCYANIC ACID.

*By Mr. C. SNEWING, V.S., Rugby.*

THIS subject, to which the attention of the profession has lately been called, is one in which the tyro may embark with equal chance of success with his more experienced contemporary; for the effects produced by the removal of the hairy covering to the body are, doubtless, in accordance with "those thousand secret operations that are constantly going on in the animal frame;" "therefore," in the language of Dr. Southwood Smith, "with whatever diligence we investigate these operations, the great problem remains, and probably ever will remain, unresolved: still it is both a pleasurable and a profitable labour to follow Nature in her path, to the extreme point to which it is possible to trace her footsteps; for the phenomena themselves are often in the highest degree curious and interesting, while their order and relation can seldom be so considered as to be understood without the suggestion of practical applications of great and permanent usefulness."

I do hope that there will be many who will not "remain content with the acceptance of this boon, without assiduously applying themselves to the philosophy of the thing—the *modus operandi*."

I, for one, do even go further than Mr. Turner, and not only affirm that it is "a tonic inferior to none at present known in the whole range of our pharmacopœia," but that even his deep cautery lesions, which he draws so freely on the ancles of his patients, are not to the part a greater bracer than this is to the whole body.

An inquiry into the cause of this involves a question no less deep in interest than obscurity, and which will not admit of hasty solution. Our "well-read employer" must patiently wait for an answer, until the subject receives the collected opinions of many, the result of their observation, and an extended series of experiments.

That there is a subtle, and, when undisturbed, a latent substance pervading all material bodies, which is capable of exciting or destroying life in an instant, not only in the lower animals but

in man, the discoveries of philosophers, and the untimely end of Professor Rickmann, and others, testify. That the substance is capable of existing in opposite states, and undergoing transmutation, is clearly exemplified in the laboratories of nature and art.

It is also ascertained that the power of conducting or transferring this electric fluid, as it is termed, from one substance to another, and that of exciting or giving rise to the phenomena which it produces, do not belong to the same body.

It is also demonstrated that hair is a substance which is capable of being, in conventional language, excited; it therefore follows, in accordance with the laws which govern electricity, that the same substance must be a non-conductor of it, from its being one of the sources from which it can so readily be derived. And upon reference to the catalogue of those bodies, which the labour and investigation of man have been enabled accurately to arrange in the order of the conducting powers, we find the fluids and animated part of the creation standing high in the series; while we find, and can trace through an extensive range of the animal kingdom, in the structure of the envelope of the body, the beautiful design and display of wisdom which is shewn by the Omnipotent in the construction of his noblest works—in coating it with a substance, not alike in all animals, but endowed with the same power—that of becoming incapable of being brought within the vortex of that sublime but destructive phenomenon, lightning. Yes! this substance, which shrouds and protects us from the threatening and surrounding danger, is *cuticle*; but in some of the lower animals, and in that to which our subject has reference, there is added another and a more impervious one—*hair*, which is placed nearly at the bottom of the catalogue to which I have alluded.

What, then, of necessity follows the removal of this outer barrier to the passage of electricity into the body?—which, in accordance with the inherent power which it possesses, is, like the metallic chain extending from the conductor of an electrical machine to the great reservoir of the electric fluid, the earth, and is, when excited, robbing the body, its greatest source, of electricity, to impart it to other external things abounding with less of the electric fluid, and thus an electric change is formed. When, however, the hair is left alone, and not excited by friction, the electric current in the body must be feeble; and if its operations are influenced or promoted in any degree by it, they must, in the order of things, suffer.

What then—kind reader—will you infer, if that which has been stated is at all tenable? Why, the first deduction is autoptical, the system being thrown from a state of debility into one of excitement, or rather increased energetic action. The other deductions which follow are the early buds of an immature mind, that await,



exposed to be blighted by the nipping frosts of future experiment and observation, or else through them ripened by the sun of future research and investigation.

They are these:—That the skin, exposed and bedewed by its own exhalations, affords a less barrier to the passage of electricity. I say less, for there is still that delicate tissue, the almost dry cuticle intervening; but the body being, as it were, now no longer perfectly insulated, there is established a current and continued circuit of the electric fluid in and out at every part of it, the result of which, I infer, is self-evident—exhilaration of the sentient, and increased tone in the organic, systems.

That clipping is, as expressed by the celebrated Nimrod, “an outrage on Nature,” is to me like the morsel which, at some time in our life, becomes our lot, “bitter to swallow and hard of digestion.” That we inflict one great outrage on Nature when we subject the horse to domestication, I will freely admit; but any thing that we can do in amelioration of the “first offence,” and which we find to be attended with decided advantage to the animal, cannot surely be viewed as another outrage.

That an animal with a long coat, kept in a July stable in the middle of winter, is capable of undergoing the same degree of long and repeated exertion with one that has been clipped, or the hair of which has been shortened by other means, appears to me an untenable doctrine.

That clipped horses are less under the influence of those agents which induce disease, particularly of the respiratory organs, is an assertion that, I believe, will be found no less startling than correct. That it has a marked and benign influence—nay, almost a specific effect, in the removal of chronic disease dependent upon functional derangement of the respiratory apparatus, as chronic catarrh—has, under my own observation, been sufficiently illustrated to convince me, particularly in two cases, to which I will by and by refer.

But, my dear Sir, I am ready to admit that, as far as condition goes, we can obtain the same end without clipping. And how is that accomplished? Why, in the language of Nimrod, “by physic, dry food, a July stable all the year round, and by assiduous grooming!” Assiduous grooming! Yes; lay that aside, and on the horse with a natural coat you labour in vain. Its effects, then, are acknowledged to be the production of a coat, short, fine, glossy, and smooth. But has it no other influence? Has not that highly electric body, the hair, been excited by friction? What, then, has become of the large quantity of electric fluid which has been produced or set free? Has it served no useful purpose in the animal economy? Is it not probable that by this the same end is obtained

as by clipping? If proved so to be, we shall soon arrive at higher and more practical deductions; and agree that the best material for dressing horses with is an electric rubber, and that rubber made of hair.

The tenets, then, that I have dared to advance amount to these:—that, according to the existing quantity and state of electricity in the animal body, its operations are feeble or energetic;—that the great supporter of vital power is an immaterial substance closely resembling, if not identical with, that which has been termed electricity;—that the power which the body has of assimilating some substances into its own nature, and of rejecting others, is referrible to the influence of this agent;—and, further, I consider that Nature has not ordained that, in winter, there should be an extension, a greater supply of hair, solely for the purpose of protecting the body from the effects of cold, but that it is a wise provision at this season of the year, when the supplies for animals in a state of nature are by their keeper so scantily given and frugally withheld, that the increased growth and length of hair conduces largely to diminish their wants, from forming a still greater impenetrable barrier to the passage of electric fluid, and more effectually arresting its circuit.

Where rest those animals which, during the season of hybernation, are in torpitude? Is it not in places most secluded from the influence and varying changes of electricity? In places where this fluid generally holds an equilibrium on all sides, and where each of its particles are repelling and not attracting others towards them? The influence of this state of things, aided by the dormant condition of the external senses, induces a state of somnolence, by which we ourselves know, when it enshrouds us, that the workmen of Nature within us grow indolent.

Respecting the other point—"the magic effect of the clipping on the wind of the hunter"—it appears to me to admit of more easy solution than the effects which have been already described as proceeding from the operation.

That the skin is a respiratory organ is beyond the pale of doubt; for when in contact with the air it is proved by experiment, that it "separates a portion of carbon from the blood, and to the extent in which it does this it is auxiliary to the lungs;" "it relieves the blood of its superabundant watery particles," the chief conductor of electricity from the body.

That the surface of the body is warmer in a clipped horse is manifest to the hand. That this augmentation or increased supply of caloric is derived by the increased elimination of carbon is more than probable. That the lungs, more especially the lining membrane of the air-passages, are powerfully influenced by clipping,



and less within the sphere of irritation, or causes which induce disease from without, I am prepared to bear testimony to.

I bought a cob in the month of September 1838, with a fixed cold—a catarrh of some months' standing, which interfered not with his general health, and proved only a source of annoyance. I made him the subject of experiment, and commenced a trial of opium in combination with hydrocyanic acid and other agents. The first dose contained ʒss of opium and seven drops of the acid, of Scheele's strength. Accidentally going into the box about two hours after giving it, to my surprise I found the horse completely vertigose—unconscious of things passing around him—reeling to and fro, and unstable in all his movements. I examined into the state of the circulation, and found the pulse beating twenty-six per minute. This was too interesting a scene to be passed over without further notice. I directly turned my attention from the attempt of removing the disease, and began to institute an inquiry as to the agent or agents by which so interesting a phenomenon had been produced.

On the following day, the pulse being thirty-six per minute, I gave one drachm of opium in the form of ball. In two hours after he appeared drowsy; but there was nothing approaching to vertigo, and the effect died away in a few hours, without any marked impression being made on the pulse.

On the next day I gave twenty drops of the acid in the form of ball, the pulse still the same. In a little more than an hour it had fallen to thirty, where for a few hours it remained, without any other visible effect being produced.

On the fourth day I gave the opium and acid in combination, as on the first day; when, again, precisely the same effect was produced, the pulse falling to twenty-four per minute, and continuing there for three hours or more. The discovery of this, which promised to be of practical advantage, awakened in my mind the most pleasing train of thought. The hope that I had gained by the combination of two agents such direct sedative action, led me to give it further trial; when I found that it produced the same effect on another horse—that in both it allayed the irritation, and gave temporary relief: temporary, I say, for, to my mortification, I found that, when discontinued, the cough returned.

But, although defeated, one point was gained, and the words of our friend, Mr. Morton, were verified—"the advantage to be derived from the combination of medicinal substances has been too much lost sight of." By this experiment it was ascertained that an influence—a sedative power—over the heart's action can, to the degree which has been shewn, be safely obtained only by the com-



bined action of two agents in diminished doses. This in abler hands may be turned to practical and permanent advantage; and I trust the narrative may rouse some talent to investigate the subject.

But to the subject. Baffled in both instances as to the giving permanent relief, I put the cob, the subject of the first experiment, to work; but, after a few weeks, being annoyed by so frequently being told about his cough, I made up my mind to sell him. Being rough in his coat, I had him clipped; when, after a few days, my attention was drawn to the circumstance, that either my horse's cough must have left him, or, from repeatedly hearing it, I had ceased to regard it. The thought dwelt on my mind, and, true enough, I found it had left him. I rode him on through the winter and the following summer, and he had no return of it.

The other instance is in a mare, which I now ride. In the months of August, September, and October, she was continually being the subject of intermittent cough. I had her clipped: in a few days she ceased to cough, and has continued so ever since.

In conclusion, I cannot express a hope, after what I have advanced, much less dare sanction an opinion, that clipping of hack horses "will one day be superseded by singeing."

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## POLYPUS IN THE LARYNX OF A COW, AND ABSCESS IN THE ARYTENOID MUSCLES.

*By Mr. W. A. CARTWRIGHT, Whitchurch.*

IN December last, I was sent for to see a heifer, rising two years old, that made a great noise during respiration; in short, was a roarer. She had been out at a lay all the summer, came home in October, and had a husk on her, supposed from a cold.

In November she began to make a noise in her breathing, but gradually got worse. There was no external swelling about the throat; but I had little doubt the obstruction lay in the larynx or upper part of the trachea. I therefore put a balling-iron in her mouth, and examined about the larynx, and found that I had a difficulty in introducing even my finger into it. Not knowing the exact nature of the case, I inserted a seton in each side of the throat, and blistered it well; but advised her to be killed, as she was good meat, and not far gone in calf. In four or five days afterwards she was sold for £5 to a butcher, and killed.

*Examination.*—On taking an external view of the larynx, it was evident that there was a small tumour on the superior and posterior half of it, and inclining a little to the off-side, and pressing

between the thyroïd and arytenoïd cartilages, by which means the anterior edge, or rima glottidis of the off-side, was forced towards the opposite one, the off-side edge lying exactly in the centre of the glottal opening. This tumour was situated in the arytenoïd muscles, and was of the size of a small walnut. On opening it, it was found to contain very healthy white pus, a portion of which was seen to ooze out into the larynx through a small opening near to the root of the polypus hereafter described.

Within the larynx there was a polypus, a little larger than an ordinary-sized marble, and attached by rather a broad root to the arytenoïd cartilage, near to their junction posteriorly. In consequence of the abovementioned abscess pressing against the superior off-side edge of the rima glottidis, the polypus was scarcely discernible on looking into the larynx; but on looking at it up the trachea, it was distinctly visible, and filling up nearly the whole cavity, leaving only a small triangular opening, the widest part (towards the polypus) being little more than an eighth of an inch wide.

The off-edge of the rima glottidis was more in the centre of the glottal opening, most probably by the polypus being attached thereto, as well as by the pressure of the abscess.

Within the abscess there were two small pieces of cartilage, as if ulcerated off, half an inch long, white, and apparently sound. I never saw any thing resembling them before. From what they came off I could not ascertain, as I have not preserved the parts.

Attached to the liver and diaphragm; on the off-side, there was an abscess containing about a pint of white healthy pus, a portion of which penetrated the liver and diaphragm, that, independent of the abscess, were sound.

*Observations.*—Polypi in the larynx are, I fancy, rather unusual occurrences. Although this was in a difficult place for extraction or examination, I am inclined to think that, had I known of its exact nature and size, I could have removed it. I ought most decidedly to have cast the heifer, and not to have trusted to a slight examination when she was merely standing, and in an unruly state; and I can assure my readers, that the introduction of the arm into the mouth, without the animal being cast or properly secured, is not a little hazardous, and might endanger the fracturing of it, as I well recollect, in one instance, in examining a fat cow that was choaked, and which ever since has been a lesson to me.

Had this cow been cast and the polypus detected, I think that a noose of whipcord could have been passed around its pedicle, by which means it would have been pulled more forwards, and with some instrument cut off, or have been torn away; but, then, I

think, it would have been absolutely necessary to have performed tracheotomy, so as to have enabled her to respire during the extraction of it.

There would have been a caution required in the removal of it, by the insertion of some hook or thread through it, so as to prevent the danger of its dropping into the trachea. Had it been removed, it is more than probable she would have continued to be a roarer, though in a slighter degree, from the abscess and thickening about the parts.

Some seven or eight years ago I was requested by a veterinary surgeon in an adjoining town to examine a two-year-old colt, that was a roarer in consequence of having a large polypus in one of his nostrils. I was of opinion nothing would be of service but the extraction of it, and was requested to perform the operation. I cast him, slit up the nostril as far as I could, and with great difficulty cut it out piecemeal, during which he lost a great quantity of blood. The nostril was sewn up, and healed by the first intention: the colt was cured, and the polypus never grew again.

## CASES OF HERMAPHRODISM.

*By Mr. W. WOTTON, Tiverton.*

ON looking over the number of your valuable publication for December last, I see that mention is made by M. Vallot, at the Central Agricultural Society of France, of that curious malformation, the Hermaphrodite. Allow me to communicate two distinct cases of animals of this description, which have come under my immediate observation.

The first is that of a pig, which was one of a farrow of thirteen. It was strong and healthy; but was killed by the sow lying on it when two days old. The owner, a respectable farmer in this neighbourhood, gave it to me after its death, and told me that he had seen it void its urine and fæces, which caused him to take particular notice of it, as, until that time, he had believed it—from the appearance of the scrotum—to have been a perfect male.

Immediately under the anus were a perfect vulva and vagina, as in a well-formed sow; but underneath this were situated the testes as in a boar.

Having doubted, at first, whether they were testes, and wishing to preserve the external organs, I cut the body in two, immediately behind the last rib, and having carefully removed the intestines,



without injury to any other organ, I drew the testes, one after the other through the internal ring by the vasa deferentia and cremasters, and found them to be as perfect testicles as you would see developed in any other animal of that age. The vasa deferentia took their separate course to the fundus of the bladder—there, joining each other at a right angle, they gave off a single vessel, which was attached by cellular membrane to the bladder, and followed it along the centre to the neck, terminating in the urethra at the usual place. I also inflated the bladder from the vagina, and with a small probe examined but could find no uterus; whence I conclude that there was no other passage but from the urethra into the bladder.

This is as true a description as I can give, on account of the tender age of the subject. Had it lived to an adult period, the examination of it would have been interesting to a greater degree, and would have afforded particulars for a more full and correct detail. Such as it is, if you consider it worth publication, it is at your service.

The second case is that of a grey cart horse, aged, the property of Capt. Adney, of Ramburton, who bought it at Binegar fair for £15. He told me that he could not stand by and see so valuable and useful an animal offered at so low a price without purchasing it. Of this case I can only describe the external organs. The animal is still to be seen at Ramburton, where it works on the farm, and, as the servant told me, is the best working horse the captain possesses.

On lifting up the tail the first impression is that it is a mare. There are about three inches of perineum between the commissura superior and the anus, and there is the appearance of a perfect vulva; but, on turning back the labia, the glans penis makes its appearance, which is quite natural in its formation. The penis in a state of erection (for there is a strong desire for sexual intercourse) is about ten inches in length, and protrudes through the hairs of the tail obliquely downwards and backwards. There are no testes, but a perfect udder and teats. The passion of the male sex is the most predominant.

These, Sir, are the only two cases of animal hermaphroditism which I have had an opportunity of seeing, and I consider them fit subjects for the appellation. We frequently may see malformations, but seldom have both sexes in a manner combined as in these instances. Perhaps some of your more experienced correspondents may be able to furnish to the veterinary world some communications on the subject, which, though not of the most useful kind, is at least interesting and worthy of notice.

I am, &c.

## A REPLY TO MR. CARTWRIGHT'S LETTER ON THE SUPPOSED ABUSES AT THE ROYAL VETERINARY COLLEGE.

*By Mr. GEO. FISHER, Student of the Royal College of St. Pancras.*

BEING a constant reader of your valuable periodical, my attention has been directed to an article which appears in the January number from the pen of Mr. Cartwright, of Whitchurch, entitled "On the Abuses of the English Veterinary College," and assuming to be a disclosure of "passing events" which have occurred to the author. He commences as a philanthropist, introducing his subject in an exceedingly playful and poetic strain; and with some considerable degree of egotism informs the profession, that he is destined to be the oracle "to point out *what* he considers would be advantageous to the student and the public."

"A Daniel come to judgment! yea, a Daniel."

It is strange, "passing strange," that so young a member of the profession should so soon have discovered "the fountain to be impure;" Mr. Cartwright being, I believe, a veterinary surgeon of some eight or nine months' standing, and not, as he would wish the world to believe, "twenty years had elapsed since he first launched into that sea of anxiety and trouble." Previous to this "spectator of passing events" entering at the College, I am informed his twenty years were spent in the humble but not unworthy calling of a farrier; but his soaring mind not being content with the soubriquet of "cowleech," he became a candidate for a diploma, which he obtained.

Having been a pupil at the College one session with Mr. Cartwright, "I consider myself qualified" to give a direct denial to some of his statements; and though it is not my intention to follow him through the gross abuse he has been pleased to heap upon two highly respected officers of the institution, and which he informs us, "from his own practice, and the writings of others," he is entitled to do, yet consider it my duty to come boldly forward, and state what I know to be facts.

I commenced by paying a tribute to Mr. Cartwright's philanthropy, for in the first paragraph of his article that noble principle shone forth; but judge my astonishment when, proceeding farther, to find that he had departed from his text, and commenced a cowardly and malicious attack on a gentleman of whom no man could in truth speak an offensive word.

But, previous to the attack on Mr. Barth, he informs us of the

"astounding fact," that "the Governors were perfectly satisfied with the present lecturers, and that they would not appoint another lecturer on cattle practice." Mr. Cartwright here tells the truth; and he could, if he had pleased, also have informed the public, that when the Professor made known this "astounding fact," it was received by the pupils with considerable applause.

He then proceeds to ask, "Why is there such a demonstrator at the College?" And here I must accuse him of a want of charity, and of assuming the character of a modern Iago, who, while he assumes the appearance of friendship, is at the same moment traducing and endeavouring to blacken the character.

Mr. Barth received his appointment as Demonstrator of Anatomy during Mr. Cartwright's pupillage; and being a young man, and also having been a pupil with many of the pupils then at the College, felt the delicacy of his situation, which is natural to any beginner. The only failing (if such it may be called) I observed in Mr. Barth proceeded from a want of confidence; and let me ask any man commencing his career as teacher in a school of anatomy, where there may be from sixty to seventy students, whether he would not feel as Mr. Barth did? You, Sir, from your experience as a lecturer, must be aware that confidence, and the volubility of language required by a teacher, especially in a science so abounding with technicalities, are only acquired by practice, and, at the commencement, a considerate feeling on the part of the auditors.

Mr. Cartwright then states that Mr. Barth is not a good anatomist!

"O! learned judge!—mark, Jew—O learned judge!"

This I deny; and my assertion will be borne out by the whole of my fellow-students; and I feel pride in having it in my power to pay tribute to Mr. Barth's well-known quiet and gentlemanly character. But Mr. Cartwright considers "a good demonstrator is of the greatest importance and value:" so be it; but this gentleman would require a man of more than extraordinary talent. Does he recollect, when dissecting the eye of a pig, making a discovery of a development or radiation of the muscular structure, which enabled it to see the wind? I certainly was not in the dissecting-room at the time, but am informed by those who were that such was the fact, and that Mr. Barth did enjoy a hearty laugh with the students present at Mr. Cartwright's expense. Here, Mr. Editor, I think I have arrived at the cause of antipathy to the Demonstrator.

Mr. Cartwright then proceeds to state, that the demonstrations sometimes occupied only ten minutes. I certainly attended demonstrations regularly last session, and never found such to be the



case, thirty or thirty-five minutes being the average time occupied by Mr. Barth; and on the days he did not officiate, the Assistant Professor, Mr. Spooner, occupied an hour in the dissecting-room: this Mr. Cartwright either negligently or wilfully forgets to mention.

I now turn to "the unkindest cut of all," the calumnious attack on the Professor; and I know not whether to accuse the author of impudence or ignorance, but consider both, combined with arrogance, must have prompted him to make such statements. For an unlearned man, as Mr. Cartwright really is, to accuse Professor Sewell of a want of knowledge, is absurd, and will be considered as such by all members of the profession and the public. In fact, all parties here who have read the personal attack on Mr. Sewell agree in its being a malicious, scurrilous, and dirty libel, and as such, if Mr. Sewell were inclined, could bring the author to a proper sense of his position.

He accuses the Professor of being unfit to hold the situation he does—" *Et tu, Brute!* "

The name of William Sewell is a direct contradiction to the infamous statement; a gentleman who has laboured in his profession for upwards of forty years, and acknowledged by all members to have, in conjunction with the immortal Edward Coleman, raised it from its pristine state of ignorance, and placed it in the enviable position it now occupies, to be accused by such a man of incompetence!

"Oh! shame, where is thy blush?"

Mr. Cartwright states, that the Professor's lectures are irregular and unsystematic. This assertion I deny *in toto*. The Professor regulates his course as do all other lecturers on surgery; but at the Veterinary College he also gives the practice of medicine, which in human schools of medicine is a distinct course, Mr. Cartwright, perchance, not being aware of this fact. I never had any difficulty in taking notes of the lectures, and have at the present time those of last session delivered by Professor Sewell, and noted by Mr. Edward Grey, of Edinburgh.

But the author having indulged in some fallacious observations regarding "cattle practice," I feel it my duty to give a direct contradiction to them. He states that the diseases of cattle were only slightly alluded to by the Professor "as the same disease in the cow." Such is not the case. The Professor took immense pains to obtain animals labouring under the then prevailing epidemic; and while they were under his care, DAILY noticed to the students the symptoms, progress, and treatment of the disease; made many post-mortem examinations; gave several lectures entirely on the subject; visited the large dairies in and around the metropolis;

and published a circular at the request of the Royal Agricultural Society, which was distributed throughout the kingdom; and I have noticed in many provincial papers the good effects resulting from the treatment recommended. These, Mr. Editor, are facts, undeniable facts: and I am sorry that any member of the veterinary profession could have concocted such a tissue of falsehoods as appear in the article under notice.

“Quick with the tale, and ready with the lie—  
The genial confidant, and general spy.”

Had Mr. Cartwright possessed common candour, he would have pointed out these “abuses” while at the College, or have complained to the Professor in a gentlemanly manner; and then, I am sure, redress would have been afforded him. This he did not possess sufficient courage to do; but after he has passed, and returned to his practice in the country, he pens a letter, which you insert, and which, instead of being a benefit to the profession and student must injure both in the eye of the public.

Mr. Cartwright then takes upon himself to point out that which ought to be done; and his assertion is, “that the College ought to have every thing within its own walls, without the pupils being compelled to travel three or four miles to hear lectures.”

The College has every thing required by the veterinary student within its own walls, and it is merely a matter of choice on the part of the student whether he attends other lectures. The professors in the different schools of medicine in the metropolis allowing veterinary students to attend their lectures is merely a matter of courtesy on their part; and “the more industrious than the rest” avail themselves of the boon. As to the public notice respecting operations, it is not required, Mr. Spooner always informing the students who accompany him round the hospital of the case, and the hour at which the operation is to be performed. Mr. Cartwright then indulges in some very extravagant remarks concerning the management of the dissecting-rooms; and in this particular department I will give him credit for great attention, and endeavour to recal his memory to rather extraordinary conduct on his part there, he never having been particular whose subject he laid his hand on, I suppose to assist the student in dissection; but I have heard some rather severe remarks used concerning him.

As to the paragraph which states that the students do not possess one spark of independence among them, I can assure the author that the good feeling which exists between the professors and students will not be in the least degree marred by his speaking out for them, and I defy him to point out an instance of even simple unpleasantness; nor is there a school or college in the king-



dom where the officers are more respected and beloved than the Veterinary College. He states that the students dare not complain, "for they would be marked as black sheep." Miserable idea! and shewing to any reasonable man the narrow mind of him who could make, leave alone pen, such an observation. It strikes me the author will be marked as a scabby sheep by all members of the profession.

Last, though not least, Mr. Cartwright's modesty causes him reluctantly to touch upon the Medical Examiners. I consider him ungrateful, positively ungrateful, in mootng the subject: he has to thank their leniency and kind consideration for allowing him to be a member of the College, as it is considered, had the board been entirely composed of veterinary surgeons, he would have returned to his native place with the prospect of "a beggar's harvest gained by nightly toil." He is awfully severe concerning certain members having disgraced the profession; but I consider in this particular he stands A 1; and seriously think, to use his own words, "he had more luck than any thing else in passing his examination." Mr. Cartwright has also made some LOW remarks on what he considers the *fundamental* wants of the College: these I pass over, simply regretting his taste.

I have now, Mr. Editor, completed my somewhat long epistle, and in conclusion would recommend Mr. Cartwright to have done with authorship, unless he can ground his assertions on facts; and although the "*cacoëthes scribendi*" is strongly developed in him, yet his style being vulgar and abusive, I fear he will never, by means of his pen, lay by sufficient of this world's goods to enable him to found a Cartwright fellowship in the new college he so vauntingly recommends the establishment of.

I have the honour to remain, &c.

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## A CASE OF SINGULAR AFFECTION OF THE STOMACH.

*By Mr. H. CHRISTIAN, jun., V.S., Canterbury.*

THINKING the following case to be a singular one and interesting to the profession, I have enclosed the particulars for your valuable periodical, THE VETERINARIAN.

In November last, a sporting gentleman consulted me respecting a hunter (thorough bred), which was affected last summer, after coming from grass, with spasms of the neck, sweating profusely, and continually placing his fore feet in the manger. In this position he would stand for several minutes, occasionally lying down. It was evident, that, in consequence of these spasms, the fluid or food he had taken passed up and down the gullet to within six inches of the pharynx; and after excessive pain, and many attempts to vomit,



and which sometimes lasted four or five hours, a considerable portion of it was thrown up. This occurred sometimes two or three times in a week, and other times not more than once.

I acquainted the owner that I thought there was not much chance of doing any good, as I feared there was organic disease of the cardiac portion of the stomach, or of the internal surface of that viscus.

Mr. Legrew, V.S. to the 13th Light Dragoons, now stationed at Canterbury, saw the horse with me, and we ordered small doses of calomel and vegetable tonics, which seemed greatly to allay the irritation, although it did not entirely stop the eructations. The horse ate but little, and wasted rapidly away; and on the 18th instant he died.

*Post-mortem examination.*—The peritoneum and pleura were very much inflamed. Both lobes of the lungs were gorged with blood, and the heart filled with it, but healthy. There was chronic disease of the liver; the bowels and stomach (except the cardiac orifice of the latter, which had a stricture) were in a healthy state. A sort of second stomach, as the farrier called it, was formed at the termination of the œsophagus, which was an expansion of that tube large enough to hold three or four pints of fluid or food. I did not however consider this disease, neither did Mr. Legrew, as the immediate cause of death; that was evidently attributable to the inflammation of the lungs, arising from the sudden change of the temperature which took place at that time. I had not seen the horse for several days, and the owner did not perceive any change in him until Sunday, and on Monday he died.

I have a few other cases which I will send you on the first opportunity. Wishing THE VETERINARIAN all prosperity, and being one of the old contributors to that valued work, allow me to congratulate you upon its success.

I am, dear Sir, &c.

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### GALVANISM AND RABIES.

[The following note is extracted from the *Medical Times* of October last. It is under the head "Academy of Sciences, Paris, Sept. 22."]

THE effect of the Galvanic current through the wound of Inoculation from Rabies in dissipating the symptoms of that disorder is very remarkable.

The author says, it is sufficient to establish an electric current through the wound by means of a wire, communicating with one of the poles of the galvanic pile in action, the other extremity being in contact with another part of the animal, in order to remove the morbid symptoms. This experiment belongs to M. Pravaz.

## DESCRIPTION OF SINGULAR MONSTROSITY IN A LAMB.

*By Mr. A. S. COPEMAN, Walpole.*

ON the 2d of April in the present year, one of the ewes of Mr. Jacon, of Westhall, died in parturition. The post-mortem examination discovered a singular mal-formed lamb. Its head and part of the neck were separated from the body at the vertebra dentata. The thorax was flat, having its longer axis from side to side. It contained neither lungs, heart, pericardium, or mediastinum. There was not even a single vestige of these organs. Nothing was in the thoracic cavity, but about six ounces of a serous transparent fluid which filled it.

In the abdomen there was neither liver, spleen, nor pancreas, nor any of the stomachs. The intestines commenced in a kind of bulb near the left kidney, and were perfect. From the situation of the umbilicus, there projected a fine membranous sac, covered with innumerable bloodvessels, and containing two pints of a serous transparent fluid, which filled the abdomen. At its base was inserted the usual vessels from the mother, which spread over the sac, and formed the venous plexus of which I have spoken. The whole of the cellular membrane connected with the cutis was filled with serosity.

The termination of the legs was singular—there was no division at the termination of the cannon bone, and each foot had but one phalange.

A dry preparation of this monstrosity is now in my possession, and it will give me great pleasure to exhibit it to any medical or scientific gentlemen.

## THE VETERINARIAN, FEBRUARY 1, 1841.

*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

WITH pleasure and with pride we request the attention of our readers to the observations on the present Epidemic among Cattle, by Messrs. Wallis, Lepper, and Holmes. We select them from a mass of documents on the same subject, not as being superior to others, but for certain reasons which we will briefly state.

Mr. Wallis gives an excellent account of the Epidemic—its nature, symptoms, and mode of treatment; and he touches briefly and admirably on the question of divulging *to the public*, under the present circumstances, the whole course to be pursued in the management of it. He says—and we cannot do better than give his own words, for they contain the very pith and marrow of the subject—“I have not a word to say against those who have written for the public; but, on the contrary, I think that they have done right, inasmuch as they have thereby contributed to the advancement of science and the profession. They deserve and have my thanks: but still I am of opinion, that it would not be right or honest towards ourselves to place the knowledge we have acquired by an early and expensive education in the hands of those on whom we depend for support, and who would naturally avail themselves of such liberality to our exclusion.”

It, however, so happened that, at an early period after the appearance of the Epidemic, and the mortality that followed it, various letters were sent to the Royal Agricultural Society of England, by members residing in various parts of the country, complaining of the losses which they sustained, and requesting advice as to the course which they were to pursue. These letters were referred to the Professor of the Veterinary College, and he supplies the Society with a long and complicated account of the malady, and the course to be pursued, and this is sent to every member.

What was the consequence of this? The veterinary surgeon was no more thought of. A kind of disseverment took place between him and his old employers, which for many a year will leave its injurious effects. The bailiff, and the farmer, and the gentleman began to doctor for themselves. In milder cases, the animals got well—in others, and they were not a few, these persons puzzled and confounded themselves with regard to the indications of bleeding, and purging, and feeding; and many an animal was lost whose life ought not for a moment to have been endangered, and the mortality was far, far greater than it otherwise would have been. The Editor has at the present moment before him several letters from practitioners in different parts of the country, who speak feelingly and strongly on this point. Mr. Lepper traces no fewer than nine deaths to these causes. It was the natural course



of things. It was that which would have resulted if directions for the treatment of influenza in children were distributed among the cottagers in some unhealthy season. The Society acted hastily, and not a little injuriously towards the farmer and practitioner. The course that ought to have been pursued has been indicated on a former occasion.

We observe with pleasure the mode of proceeding adopted by the authors of these reports. Every question is answered fairly and candidly. Sufficient of the medical treatment is stated to enable the practitioner to suit the remedy to the occasion, and the connexion between the medical practitioner and his patients is not, for the sake of both, dissevered.

Mr. Lepper follows the same course with Mr. Wallis; and he gives us a statistical table of the mortality of the cases concerning which he was consulted. This has been already referred to, and it speaks volumes as to the person to whom the care of these patients should be entrusted.

To him succeeds Mr. *Holmes*, who departs from the order of the questions, but still communicates information not inferior to that of his brethren. The reviser of all these accounts would be thankful if the order of the questions could be retained; but still he will be grateful for information so valuable as that given by Mr. *Holmes*, in whatever form it may come.

The communication from Mr. Wotton has relation to the horse. We cordially thank him for it, and should feel obliged for many more of the same kind from those who could so readily supply them.

The reader will observe with unfeigned pleasure the numerous sketches of this Epidemic as it has appeared in the horse. The Essays, particularly that of Mr. W. C. Spooner, are truly valuable, and the debate, although short, will be read with interest.

Whether to be published in the first or the second portion of this work, they will be doing the cause of their profession much service who will contribute to Mr. Youatt, or to Mr. Morton, their opinion of the character and proper treatment of the Epidemic among horses. It will constitute the foundation of a most valuable work on these epidemics.

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Most of our readers have, ere this, perused Mr. Fisher's "Reply to Mr. Cartwright's Letter on the supposed Abuses at the Royal Veterinary College." The question of the existence or non-existence of these abuses we shall leave these gentlemen, for the present, to contest; but we feel ourselves bound in honour, as well as constrained by gratitude, to set Mr. Fisher right with regard to some erroneous assertions respecting Mr. Cartwright.

Mr. Fisher states that "it is strange, passing strange, that so young a member of the profession should so soon have discovered 'the fountain to be impure;' Mr. Cartwright being, I believe, a veterinary surgeon of some eight or nine months' standing, and not, as he would wish the world to believe, 'twenty years had elapsed since he first launched into that sea of anxiety and trouble'. Previous to this, I am informed, his twenty years were spent in the humble but not unworthy calling of a farrier."

Our situation with respect to the members of our profession makes us far more acquainted with their history and their doings than they are aware of or suspect. Our acquaintance with Mr. Cartwright is of many years' standing. His younger days were spent with his father, who was a farmer, and from whom he received a fair and substantial education. After this he was, during two years, a clerk in an attorney's office. It was there that he began to think that a more active life was better suited to him, and that the idea of the veterinary profession first entered his mind. His first step, however, was so far an unfortunate one. He staid but three or four months at Wem, and was immediately afterwards (being about twenty years of age) articled to Mr. Hales, of Oswestry, and to whom he paid a handsome honorarium as an apprentice. He was with that gentleman three years, and he could not have been in connexion with one from whom he would more surely imbibe the principles of sound veterinary practice.

His apprenticeship being expired, Mr. Hales was anxious to retain his services, and offered him a very respectable salary; but young Cartwright thought, rightly or wrongly, that he was old enough to conduct a business of his own, and therefore quitted his old master, and went to Whitchurch; but the kind feeling between him and his old master never ceased. There it would be difficult to denominate him "*a farrier*," for he never kept a forge, much

less worked at one ; but he established a druggist's shop, and professed to attend to the diseases of horses, cattle, and sheep.

We are much mistaken, if, when he first launched into "the sea of anxiety and trouble," he had nearly or quite as much of this world's goods as some have when they steer their vessel into the harbour ; but a family rapidly increasing around him, rendered it necessary for him to pursue his calling.

But, what of the feeling of gratitude which induces the Editor to come forward on this occasion ? THE VETERINARIAN was first published in January 1828 ; but with the exception of Mr. King, an old crony and friend of the original Editor, and Mr. C. Percivall, his cousin, not a single contribution towards its support was received during the first five months, and the Editors were almost inclined to despair. At length in May 1828 arrived Mr. Cartwright's paper on "Rupture of the Diaphragm." It was, indeed, welcome. It was the first of a great many contributions that we received from that gentleman, and the foundation of the future prosperity of the work. Therefore we owe to him a deep debt of gratitude, and that possibly, had it not been for him, the literary bantling would have dwindled away, and died. His style was not "vulgar and abusive," but always plain, and his arguments to the point. "By means of his pen" he has contributed to effect the triumph of the Veterinary Periodical, and the Editors owe him a debt of gratitude which they will never forget. He did much towards the effecting of a noble cause, and he stands high in the estimation of the great majority of his brethren as a diligent and laborious inquirer.

The subject in dispute, we say again, we leave with the combatants ; but we should be obliged by possessing the real signatures of three correspondents whose communications would be most valuable.

Y.

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#### TETANUS IN A COLT FOURTEEN DAYS OLD.

*By M. LECOQ, M.V., Bayeux.*

ON the 18th of June, 1837, I was requested to visit a colt fourteen days old, that had been ill from six o'clock in the morning. I could not see my patient until noon, and then I found spasmodic closure of the jaw, and the muscles of the jaw unyielding to pres-



sure. It was with great difficulty that any liquid could be introduced into the mouth. The tongue was covered with a coat of grey sediment, except at the edges, where it was red. The eyes were dull and a little retracted within the orbit. The membrana nictitans covered a considerable part of the eye. The pulse was frequent, hard, and full. The animal staggered as he walked. The alvine and urinary evacuations were in their natural state, and it rarely attempted to suck, and then was unable to accomplish its object. In these symptoms I easily recognised, and yet to my great surprise, an attack of tetanus. The friend and medical attendant on the proprietor happening to pass, his opinion was asked, and he perfectly agreed with me as to the nature of the disease.

We informed the owner of the serious character of the disease, and then employed the following treatment:—we abstracted a pound and a half of blood from the jugular vein. We prepared a drink composed of four ounces of manna and three drachms of opium, dissolved in warm water, and of which we gave a twelfth part every hour. We administered every two hours an injection composed of a decoction of mallow roots, with a tea-spoonful of laudanum, and we fomented him well with hot water about the belly and chest.

The symptoms, far from diminishing in intensity, increased until ten o'clock at night, when he died. We examined him on the following morning, and found nothing remarkable, except a little more serosity than usual in the cranial cavity. We could form no satisfactory idea of the cause of the malady.

*Mem. de la Soc. Vét. du Calvados, 1837.*

## THE CONTAGIOUSNESS OF PHTHISIS IN CATTLE.

*By Professor DELAFOND, of Alfort.*

AMONG the serious and fatal maladies to which cattle are exposed, that of the chest, known by the name of *peripneumony*, occupies a prominent situation. Existing from time immemorial in the mountainous countries of Jura, the Vosges, Dauphiny, and among the milch cows of Paris and its environs, it has within the last ten years spread into most of the departments that are rich in cattle. In most of the localities where considerable traffic in cattle is carried on, whether for milk or for fattening, this disease exists; while in those which are employed in the exportation of young beasts, as Cotenten, La Vendée, Brittany, and Limousin, peripneumony is unknown. All the departments which furnish our milch cows, as that of the Seine, the Seine and Oise, the Somme, and the North, are a prey to this fearful malady. The beautiful milch cows of the valley of Bray have not been spared. This rich valley,

distant only twenty-five leagues from the capital, and occupying a space of twenty-four leagues in length and five in width, containing more than forty thousand milch cows, and representing a capital of thirteen millions and a half of francs, sending to the market butter and cheese and fat cattle to the amount of eight millions annually, has of late been, in a manner, devastated by pneumonia. Two thousand beasts, of the value of five hundred thousand francs, have been lost.

These disasters, which seemed to compromise the attention and care of the inhabitants of Bray, attracted the attention of government, and Professor Delafond was sent to the valley to study the disease, to ascertain its character and causes, and to devise the means which may prevent or cure it. He remained more than two months at Bray, and instituted various inquiries, which have led to the most important results, and more particularly he has ascertained that this disease is produced not merely by the influence of local causes, but also by contagion.

Before he set out for Normandy, he doubted the possibility of this mode of communication of the disease; but a great number of facts, well authenticated, have convinced him that consumption may be communicated by sick animals to those in good health, both in the stable and at pasture.

M. Delafond has published a report of his proceedings, some extracts from which, we trust, we shall be able to give in an early number.

*Rec. du Med. Vét., Sept. 1840.*

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### HAIR-BALLS (*ÆGAGROPILIES*) FOUND IN THE LIQUOR AMNII OF A COW.

*By M. CONSTANT POUCHY, M.V., Heronvillette.*

THE cow that is the subject of this memoir was five years old, in moderate condition, and in the thirteenth month of utero-gestation. The calf was living when I was first called to her, but, being of very unusual size, we were compelled to dismember it, in order to extract it. The only remarkable circumstance about it was, the absence of the cerebrum and cerebellum. These two organs were replaced by a serous fluid. The vessels of the meninges were numerous and dilated, and the whole head was narrow and lengthened. There were several malformations of the head, which it is unnecessary to state; but the most remarkable circumstance was the floating of a great number of *ægagropilies*, or hair-balls, in the liquor amnii, resembling in appearance those which are found in the abomasum and intestinal canal of ruminants. Most of them were round; others assumed an ovoid form, and their diameter varied from an inch and a half to five inches.

These agglomerations were formed of hair of the same kind and colour as that of the calf, and united by means of a thick mucus. All these hairs seemed to take their departure and to radiate towards the circumference, in a manner as regular as if a brush had been used to give them this direction.

I have thought that these balls might be the produce of a kind of moulting which the calf had undergone during its extraordinary sojourn in the uterine cavity.

*Mém. de la Soc. Vét. du Calvad. 1837.*

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## PHARMACOLOGICAL EXPERIMENTS.

*By MM. RENAULT and BOULEY.*

### EMETIC TARTAR.

WE have tried large doses of tartarized antimony on the horse. Human pathologists have long spoken of its valuable effects on the pulmonary tissue of the human being, and physiologists have described its power to produce inflammation in the lungs in the dog when injected into the circulatory vessels. We have been induced by this to try its effect on the horse.

Two horses, with apparently sound lungs, were taken, and a dose of four ounces of emetic tartar was given to each, on two successive mornings when fasting. They both died on the third day. On examination after death, exceedingly acute inflammation of the lungs and pleuræ was recognized. The whole mucous surface of the small intestine and of the large curvatures of the colon were filled with a very peculiar globular eruption.

In other horses the emetic was given on eight successive days, in quantities successively increased until it reached the enormous dose of more than three pounds. We recognized after death the same irregular surface of the mucous membranes of the alimentary canal, and the pulmonary membranes were engorged with black blood; but there appeared few traces of actual inflammation; and it would rather have been thought that the animals had died in consequence of some charbonneux disease.

The effects of this medicament varied considerably, according as the digestive tube was full or empty, and the nature of the matter which it contained. If the animal had been kept fasting, or had been allowed only farinaceous food, the tartarized antimony would produce fatal inflammation of the intestinal canal, in doses of two ounces only; but when they had been fed on oats or hay, double the quantity or more was requisite to cause death. The influence of this drug on the tannin matter which this aliment contained will sufficiently explain the phenomena.

*Rec. de Méd. Vét. Sep. 1840.*





THE  
VETERINARIAN.

VOL. XIV, No. 159.]

MARCH 1841.

[New Series, No. 99.]

A CASE OF SCARLATINA MALIGNA IN A HORSE.

*By Mr. W. TURNER, V.S., Ratcliffe Highway.*

ON January 16th, 1841, at 6 o'clock A.M., I was called upon to attend a fine black horse, 5 years old, at Messrs. Rhodes, brick-makers, Stoke Newington.

*Symptoms.*—Pulse 76; respiration 20—the Schneiderian membrane redder than natural—the ears and legs cold—pawing—frequently lying down, getting up again and appearing in great pain. He has not dunged since yesterday and is quite off his food. About a month ago he had a violent attack of influenza, from which he soon recovered, and was taken again to work on the 14th. While in the Borough, stopping to unload, he was exposed to rain and snow. When he returned home he ate his food, and appeared nothing the worse; but on the next morning he was quite off his food, and continued so until I saw him.

*Treatment.*—Ext. belladonnæ ʒij, ol. lini Oj. I bled to the extent of 10lbs, when I found the pulse falter. lbss mustard, mixed with hot water, to be rubbed on the abdomen—warm-water enemas frequently.

4 o'Clock P.M.—Pulse 66, softer; respiration 16—ears and legs warm. Still uneasy, but not so much as in the morning. He has neither eaten nor drunk. He dunged once. The fæces very hard, and covered with mucus. Give half a pint of linseed oil; lbss mustard to be rubbed on the abdomen. Continue enemas.

17th, 10 o'Clock A.M.—Pulse 72, respiration 12—ears and legs warm—bowels relaxed. He appears to be quite easy. He drank some gruel in the course of the night. R ʒij ext. belladonnæ. The man that was up with him during the night states, however, that between 12 and 2 o'clock this morning the horse was often up and down, and, after that, his bowels becoming relaxed, he was apparently easy.

8 o'Clock P.M.—Pulse 66, respiration 10—ears and legs warm. He has not lain down during the day. Bowels very much relaxed, and very watery, and have been so all day.—℞ Tinct. opii ℥j.

18th, A.M., I was sent for in great haste to see my patient, as there was a strange alteration in him. When I arrived I found the following symptoms:—Pulse 90, weak; respiration 9—his nose, towards the off-nostril, swelled—serous discharge, intermixed with blood, from both nostrils. On opening his nose I perceived irregular scarlet spots, extending as high up the nostril as I could see. This appearance occupied about three-fourths of the Schneiderian membrane. He is more swollen under the abdomen than is usual from the effects of mustard—the tongue is covered with a thick mucus—the bowels are open, and the ears, legs, and body, very hot, with a feeling of dryness. His throat appears very sore.

℞ Pulv. opii ℥ij, nit. ℥ss, dissolved in warm water, and administered in gruel. The throat to be rubbed with a stimulating embrocation. His mouth and nose to be washed with vinegar and water. He drank a pail of thin gruel during the night: he will not touch that which is thick.

19th.—Pulse 72, weak; respiration 8—abdomen, chest, and nose, swelled more than yesterday—ears, legs, and body, very hot—bowels watery, but not acted on so often. Urine very high coloured. His breath has a strong putrid smell—the throat very sore. He drinks his gruel—lies down sometimes, but not so as to indicate pain.

℞ P. opii ℥ij, nit. ℥ss; starch enemas to be thrown up often.

20th.—Pulse 70, and weaker; respiration 8; discharge from the nose the same as yesterday; the breath having still a putrid smell; the dung a little thicker; urine very high coloured; swelling not so great; ears, legs, and body still very hot; but throat evidently sore. Drinks his gruel. Treatment the same.

21st.—Pulse 72, very weak; respiration 8; discharge from the nose continuing the same; the breath still putrid; dungs often, and very watery; ears, legs, and body, not so hot; urine very high coloured. Drinks his gruel, and has eaten one small carrot and two little pieces of mangel wurzel. The hair comes off the mane, tail, and legs at the least pull. Every person that sees him declares that he is rotten; and, in fact, he stinks so that no person likes to approach him. ℞ Tinct. opii ℥j, spt. nit. æth. ℥j, liq. amm. acet. ℥ij, cretæ pp. ℥ij. Starch enemas often.

22d.—Pulse 72; respiration 8; the discharge from the nose mixed with mucus; he also coughs up a great quantity of mucus; the breath still possessing the putrid smell; he has dinged but once since yesterday; ears and legs cold; the scarlet appearance not so great; urine not so high coloured. Will not drink his gruel,

but has eaten four carrots and a handful of split beans. R Spt. nit. æth. ℥jss, liq. amm. acet. ℥iv, sulph. quinin. ℥ij, best port wine, lbj.

23d.—Pulse 57, and stronger; respiration natural; dung thin, but does not smell so offensively; the urine in great quantity, but of a light colour; the breath not so fetid. Discharges a considerable quantity of mucus from the nose, also coughs up a great quantity of mucus; swelling quite gone from the nose; still swelled under the chest and the inside of legs; ears and legs warm; the scarlet appearance not so great as yesterday; the amendment is very evident. Eats any thing that is given to him, but will not drink gruel. He had half-a-pint of port wine this morning at six o'clock. I also gave him two drachms each of pulv. gentian. and pulv. zingiber. in some gruel.

24th.—Treatment the same.

25th.—Pulse 48; respiration natural; ears and legs warm; breath not so fetid. The scarlet appearance less towards the alæ of the nostrils, but higher up it is still very deep; the throat not so sore; he coughs up a considerable quantity of mucus; the discharge from the nose not so great, still a little swelling under the chest; the fæces about the consistence of cow dung; feeds well. Treatment: carb. amm. ℥ss, turpentine ℥ss, every other day.

29th.—Pulse 38; the scarlet appearance quite gone; breath natural; throat better, &c. He is very thin, but is recovering fast.

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[The above appears to me to be a decided case of *scarlatina maligna*. There are one or two papers in *The Veterinarian* on simple scarlatina, and Mr. Percivall has satisfactorily treated of it in the second volume of his *Hippopathology*; but no one, so far as I am aware, has noticed this malignant variety of it. Communications on this subject would be interesting to the profession.—Y.]

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## SINGULAR CASE OF STRICTURE OF THE RECTUM.

By Mr. JAMES ROGERSON, V.S., *Kirkham*.

ON the 10th of December 1838, a case commenced with me which did not terminate until the 1st of July 1839. Passing through Ballam on the 10th of December, I was stopped by a farmer, who wished me to look at a filly, two years old, saying that she had something that griped her. On examining her, I found her pulse 60, and strong; she was constantly looking back to her



flank, first on the right, and then on the left side, and pawing with her fore feet—when she lay down, preferring to be on her back. The udder was a little swollen and tender, and on examining the rectum finding the *fæces* hard and dry, I abstracted 12 lbs. of blood from her, and gave her a solution of aloes with oil, ordering fomentations to be applied to the belly and udder.

On the 12th she was a great deal better, but the swelling increased, and was very tender. I gave her two more drachms of aloes, and left two to be given in solution, providing her bowels were not acted upon. I also applied the camphor liniment with oil to the swelling.

14th.—Nearly the same as on the first day, with the exception of her bowels being quite open. I took away 6 lbs. of blood from her, being all she could bear to lose. The swelling being larger, and extending to the navel, and being very hard, I applied a liquid blister to it.

15th.—She was better; and the blister having acted slightly, I repeated it, and gave her a solution of aloes with oil, her bowels being a little more confined.

21st.—She had continued to improve.

On the 4th of January I saw her again, when the swelling being nearly gone, and her coat staring or standing a little erect, and her bowels being somewhat confined, I sent a few mild aperient balls for her.

She kept improving until about the 13th of February, when the owner came and wanted more balls for her, stating that the others had done her so much good that he wished to have a few by him; but he added, that he thought she had not looked quite so well for a few days back. The balls contained two drachms of aloes and two of resin.

He came again on the 13th of March, stating the same as on his last visit.

On the 16th I was sent for, the messenger telling me that she was down and could not get up. I found her down; her pulse good; the breathing good; the bowels confined. On inquiry, I found he had given one of the balls on the 13th, and said that he durst not give another, for he thought that this would have brought her inside away, she purged so violently. She passed her urine easily and well.

I applied a rug wrung out of boiling water to her back, and poured hot water on it for the space of about ten minutes, when she sprung upon her feet and appeared as if nothing was amiss, excepting straining to dung, and her loins appearing like those of an old worn-out mare.

On examining the rectum I found a stricture nearly twenty

inches from the entrance, so that I could scarcely pass three fingers. I immediately told the owner that I considered the case hopeless ; but he said I must try what I could do, for there was no telling while she lived. I sent her a solution of aloes with oil to be given ; a liquid blister to be applied to her back from the root of the tail to the front of her loins ; and blister ointment to be applied next morning. I kept the blistering up for nearly three weeks, giving her an injection night and morning, and aloes and oil occasionally. She was turned out to grass in the daytime. This was about the 15th of April.

I was castrating a colt for him on the 14th of May, when she came galloping up to us. One of the servant men desired me to look at her, and added that she was worth many dead ones : I said she looked well, and in fine condition, for so short a time ; but that I was not sure about her.

On the 12th of June I was sent for again, when I found her the same as before. The same treatment had the desired effect, but only for a day or two at a time.

About the latter end of June the owner wished me to have her in my infirmary. I consented, and he sent her on the 1st of July ; but being from home till evening, I did not see her until that time. I immediately sent for two of my medical friends, who live in the town. One of them stripped off his coat and examined the rectum, saying, it was very singular if nothing could be done, she being a great beauty, 'and half-bred. After using a great deal of force he got his hand through the stricture, and advised me to pursue the same treatment as before, with the addition of applying the iodine ointment to the stricture every morning, and opium and lard every night.

I had her in a barn, at a short distance from the house, and sent my young man to bleed her according to the wish of my medical friends. He did not get more than a pint from her, when she fell and died.

On opening her, next morning between six and seven, both friends were present, and many were the conjectures what would be the post-mortem appearances, since she died so soon after we had left her. The rectum only was diseased, being as black as a hat, and thickened from one end to the other, and one inch deep for a foot from the stricture. The stricture was cartilaginous and bony in the centre ; every other part being as healthy as possible.

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## ON MELANOSIS.

*By Mr. J. D. HARRISON, Southport.*

IN October 1822, Messrs. Cullen and Carswell had an opportunity of seeing and examining a horse labouring under that very curious disease, termed Melanosis. The animal was emaciated, and seemed to have been long under the influence of the disorder. During life they saw a number of tumours—hard, but moveable—under the root of the tail, and in the neighbourhood of the rectum. Under the delicate mucous membrane of the verge of the anus they were seen of a deep black colour. On the left buttock an enormous mass of the same was felt immediately under the skin, but connected with the deeper parts. In the centre of this mass was an ulcerated opening, from which a fœtid pus issued, mixed with small pieces of the melanosis.

On dissection, great masses of this substance were found in other places besides the cellular texture. There were many seated at the root of the neck on the right side, partly in the cellular substance lying between the muscles, and partly in the very substance of the muscles. There were a few near the apex of the scapula, under the panniculus carnosus. Some were found in the groin on the same side and in the seat of the superficial absorbent glands. They noticed one large mass of the shape and size of an orange between the 6th and 7th ribs of the right side, which had originated in the substance of the intercostal muscles, and had increased inwardly so as to raise the pleura from the subjacent bone and muscular strata. The peritoneum had melanotic matter lying upon that part where (leaving the bladder and rectum), it gives a covering to the last lumbar vertebræ. The pleura in several places was similarly affected, and chiefly where it forms the mediastinum and gives a covering to the pericardium. From near the termination of the aorta, down the lumbar region on the left side, into the pelvis by the side of the rectum, and out of it by the exterior aperture, there extended an immense chain, beginning above by one or two small insulated tumours situated on the aorta, gradually increasing in bulk, until at last the black matter formed masses near the anus, as large as a child's head. From the anal region the disease appeared to have spread into the muscles of the buttock.

Such were the situations in which this curious disease was found, the substance of all the viscera being quite healthy.

After a careful examination, Messrs. Cullen and Carswell became satisfied that the large masses of melanosis were a congeries of smaller ones of different sizes. Each was surrounded by a cyst



of condensed cellular membrane. These cysts did not communicate, but merely adhered together, thus forming large masses. Some of the individual cysts were no larger than peas, others as large as an apple, and of all intermediate magnitudes. The investing cysts of the melanosis situated in other structures than the cellular membrane (as in the muscular structure), were remarkably thin, so as in some places to be scarcely detected. The tumours, when cut into, were all of a deep black colour, similar to the pigmentum nigrum of the eye, or China ink. Most of them were as hard as cheese, while others were much softer. The vessels in their vicinity were not enlarged. Nerves were sometimes seen running over the surface, or sometimes traversing the very substance of the black masses, but without any cognizable change in the nerves themselves. The surrounding muscular texture was unchanged, and seemed merely separated in its fibres for the lodgment of the melanotic matter. On the pleura and peritoneum the disposition of the melanosis was somewhat different. It was effused on the surface of these membranes, not in round masses, but in streaks and patches. There seemed to have taken place on their surface a formation of cellular tissue, into which the black matter appeared to have been poured out, for it could be scraped off, and the serous coat was still left smooth and entire. The matter, too, was much softer, so as to be semifluid. The membranes upon which it was formed bore no traces of vascularity.

The striking appearances as above recorded are often met with in horses, not in general to such an extent, but sufficiently so to stamp its character and entitle it to a place in veterinary nosology. The notice of the profession having been drawn to it by Mr. Jackson, I have been induced to transcribe the foregoing case as being more illustrative of its peculiarities than any thing I can say from my own personal knowledge, though I have seen many cases, and can bear Mr. Jackson out in saying that it is most frequently observed in white horses: still I have seen it in horses of all colours and grades. I can likewise vouch for the accuracy of the following observations, drawn from the same source, viz. the *Medico Chirurgical Review for Jan. 1825*, and they embody all that is at present known respecting it.

“It appears that melanosis may exist independent of any alteration of structure: it may also exist where there is alteration of structure, as in pneumonia, &c. forming a symptomatic disease, whereas in the first it is idiopathic.

“There is a great distinction between the disease under consideration and cancer and fungus hæmatodes. Scirrhus chiefly attacks glandular structures that have been previously in a state of inflammation; while hæmato-fungoid tumour attacks every kind of tex-

ture. They both begin in a definite point—gradually extend their ravages in every direction—convert all the proximate tissues, by a kind of assimilative process into their own kind of matter, and finally prove fatal, by sloughing, hæmorrhage, or irritative fever. In their course they are generally attended with lancinating pains, which is seldom if ever the case in melanosis: indeed, all the cases I have personally seen did not appear to be attended by any fatal or other consequences than the inconvenience which the animal experienced when elevating or depressing the tail.

“The matter of melanosis is constantly found in cysts, which Messrs. Cullen and Carswell, in my opinion with very great justice, consider as one of its distinctive characters: indeed this is so perceptible, that I recollect an instance where I removed an apparently large tumour from the base of a farm-horse’s tail, which was no sooner accomplished and put into the countryman’s hand, than he exclaimed, “Why, Doctor, I never saw any thing so like a bunch of grapes in all my life.” Neither in melanosis had the neighbouring textures of the body undergone any alteration in consequence of the ravages of the disease. The bones are often coloured, but not diseased. The parenchymatous viscera were not altered in texture. The substance adjacent to the cyst was as healthy as the rest of the organ. There were no traces of vascularity.

“These and other considerations induced the above-named gentlemen to believe that melanosis in its simple form is of a nature quite different to cancer, both in its seat, symptoms, progress, and anatomical characters.”

Before conclusion, I beg to state that the tumour, being composed of numberless cysts, is so truly pathognomonic of melanosis, that in the bunch-of-grape-case it was as easy for me to remove one cyst from another with the knife as to separate a grape from its kindred. With this kind of negative knowledge we must be satisfied at present, until the disease shall have excited more generally, and for a longer time, the medical and veterinary world.

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## ON PUNCTURED WOUNDS OF THE JOINTS.

*By Mr. H. W. SPARROW, Alford.*

THE above subject having so recently occupied the pages of THE VETERINARIAN, farther observations on it may be deemed superfluous; but having, in the course of my practice, met with my share of these cases, and having been generally fortunate as to the results, I am induced to offer a slight sketch of my mode of treatment.

With regard to the unfortunate termination of this particular class of wounds, more may be laid to the manner of their being dressed than to the wound itself. Dressings of a harsh nature ought to be avoided as much as possible, as also poulticing and fomentations, and exposure to the air. Poulticing and fomentations oftentimes too much increase the suppurative process, and very troublesome abscesses form around the joint. The means employed should be mild, soothing, and tending rather to lull pain than to aggravate it. The following case will sufficiently explain my mode of treatment.

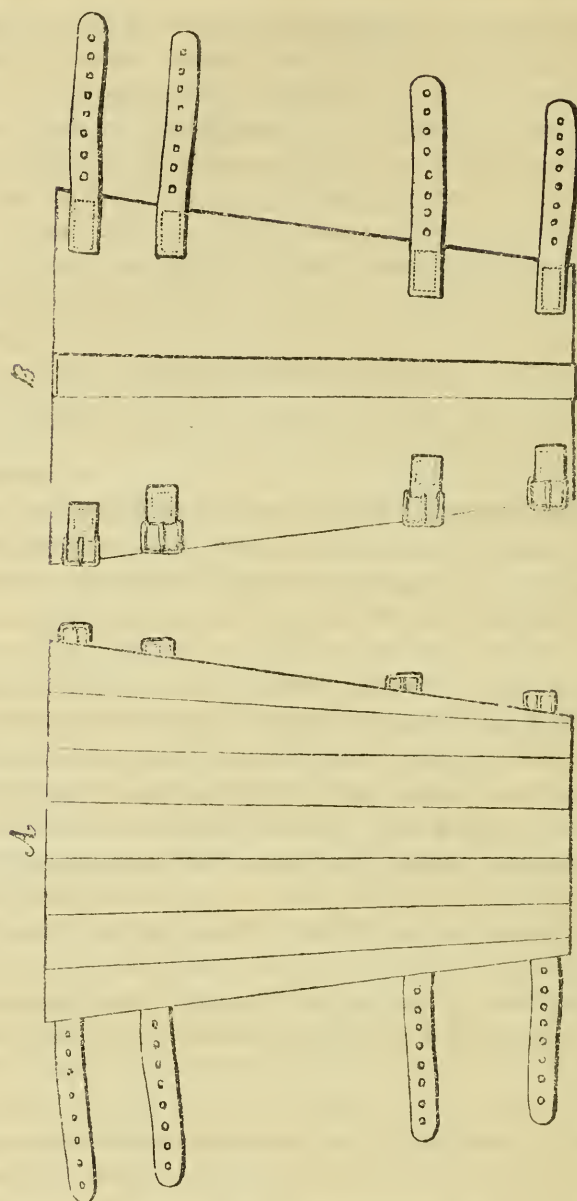
I was requested to attend a mare, the property of a gentleman in this neighbourhood. She had been whipped about the stable by the waggoner, and then ran into the *out-house*. There happened to be a fork concealed in the straw, which the mare ran upon, and one of the prongs penetrated the knee joint of the off leg in front at the lower part, passing upwards, backwards, and out at the back part of the knee. The external wound was somewhat lacerated, and about the size of a *half crown*.

I saw the mare a few hours afterwards, and found her in great pain, synovia escaping from the wound. I removed the hair from the part, and dressed it with equal parts of tincture of myrrh and tincture of opium, getting as much of the mixture as I could into the wound without disturbing it. I then touched the edges of the wound with lunar caustic, and taking equal parts of ol. oliv., ol. tereb., and acetate of lead, I made it into a liniment, saturating some tow with it, and laying it over the parts. Over this I laid more tow, and, taking a long flannel bandage, and beginning from the fetlock joint, I passed it round the leg and over the knee, and drew it of a moderate tightness, as we know that pressure judiciously applied tends much to favour the adhesive process. Having well bandaged up the leg, I put on a boot, so as to prevent the animal from bending her leg.

The following is the form of the boot, *A* giving the inside, and *B* the outside view of it. It is usually of about twenty inches in length, made of strong leather, buckling in front, and an iron plate running down the inside portion. This boot is to be buckled on just above the fetlock joint, at the back of the leg, the straps coming in front; one buckles just below the knee, the other two above: by means of it, the motion of the joint was prevented, and the animal kept it in a state of rest; a dose of physic was given, and bran mashes and hay ordered.

In two days the bandages were removed, and I found the desired synovial clot. I dressed as before, and little or no tumefaction took place. Bran mashes, hay, and aperients occasionally were given, and the mare was soon fit for work.





In all cases of opened joints, we have two grand objects in view :

First, the bringing the edges of the divided wound as nearly together as possible, the using a flannel roller, and applying it with an equal and well-judged pressure over the wound, as by pressure we favour the forming and retention of the clot, and by favouring the adhesive process we enable the wound sooner to heal.

Secondly, keeping the leg in as great a state of quietude as possible ; and that object I have obtained by means of the boot. It altogether prevents the animal from bending his leg. Slinging I avoid as much as possible.

When joints are opened from cuts or falling down, and synovia escapes, I cleanse the parts with a sponge and warm water, and lay on a pledget of tow, saturated with a liniment composed of equal parts of olive oil, oil of turpentine, and acetate of lead; I then follow the plan laid down by that excellent practitioner, Mr. Thomas Turner.

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## OBSERVATIONS ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Mr. JOHN TOMBS, V.S., Pershore.*

Jan. 23d, 1841.

My dear Sir,—I NOW send you a few practical facts respecting the prevailing epidemic in cattle, &c., with my opinions drawn therefrom. I have been brief on the occasion, thinking a minute detail would be superfluous, inasmuch as it would be going over trodden ground.

FEB. and MARCH, 1840.—Two barren heifers, bought at Tewkesbury Fair, were put in a yard with twenty-one milch cows. They were labouring under this malady, and gave it to the others, and these spread the disease to one bull and five feeding cows tied up in stalls adjoining the yard. Three sucking calves also had the disease, and twenty pigs in the yard. All recovered.

When attacked, the cows were in a yard living on hay and straw: the weather cold and dry; the situation three miles south of this town.

This was the first appearance of the complaint in this neighbourhood. The milk and butter were used as before, and with the same effect.

MARCH.—Nine milch cows and five fat cows, stationed half-a-mile apart, were attacked in the same village as the previous ones. The pigs in the same yard escaped. These cows never had communication with diseased animals, not even through the medium of the men who tended upon them. All got well.

MAY.—Four heifers were brought home in a diseased state from Worcester Fair. They had been driven on the road with other diseased animals, and fed on hay before the attack. The pigs escaped. They all recovered. The situation, two miles west of this town.

JUNE.—Six heifers got into a field where there were several others sick with the epidemic, and contracted the disease. They gave it to one bull, seventeen milch cows, six weaning calves, and some sheep. They were living entirely on grass. The situation,

seven miles west of this town, and the weather warm. The milk thrown away. All recovered. The pigs escaped.

AUGUST.—One milking cow, bought of a dealer who had in his possession other cows ill with the same complaint, gave it to thirteen other milking cows. From these thirty-four feeding cows and heifers contracted the disease, all living on grass at the time of the attack. The sheep in the same fields were not infected. All recovered. The milk was used as before, and with the same effect. The situation the same as the May cases.

DECEMBER.—Seven young oxen, eleven cows in calf, living on barley-straw, were attacked. They had never been near any diseased animals, nor the men who fed them. The weather was cold and frosty : situation two miles and a half south-east of this town. All recovered.

JAN. 1841.—Two cows in an open field, living on hay and grass, were affected with this complaint. They were housed, and communicated it to five milking-cows tied up in a shed some distance from them. The same cowherd fed them all. All got well. The milk was all sold to and used by the inhabitants of this town, in tea and for puddings, with no untoward event.

All these cases were treated by me, with many more, perhaps altogether very nearly two hundred oxen, cows, and calves, not including pigs or sheep. The disease was very prevalent in this neighbourhood in December last, among oxen, cows, pigs, and sheep; and in addition to my patients, many more than a hundred cows had it. They were treated by the owners. A sol. of alum and vinegar applied to their tongues; nitre, sulphur, and Epsom salts given internally, and a few were bled. They all did well. The majority of these animals never had communication with diseased ones, but were attacked in different localities. The weather cold and frosty.

The feeding-cattle were living at the time of attack on oil-cake, turnips, flour, and hay; and the store ones on hay and straw.

As to the soil and climate, I need only say that the disease made its appearance all around this town, within a circuit of seven miles, part of which is in the vale of Evesham. Some were attacked in the grass fields, others in stalls, and many in the straw yards. In some localities the soil was rich and sandy, in others there was a red loamy soil. Some were on a rich and others on a cold clay.

I shall now briefly reply to some of your questions, beginning at the

6th. I have only one remark to make about this question: a healthy ox travelled along a road where diseased cows had previously walked. In three days after, the same disease had firm hold of him.



7<sup>th</sup>.—I never could ascertain that the disease was communicated from one animal to another by the men who waited upon them.

8<sup>th</sup>.—I am decidedly of opinion that this disease is caused by atmospheric agency, and propagated by contagion. Calves sucking cows that had sore nipples when under the influence of this malady frequently had the disease, whereas others sucking healthy teats escaped.

9<sup>th</sup>.—The disease generally makes its first appearance in the mouth. The feet are secondarily affected; now and then, however, primarily so. There is a continual drivelling from the mouth—a champing of the teeth—vesicles on the tongue, and abrasions following on the whole of the lining membrane of the mouth. In some, half of the covering membrane of the tongue peeled off. The pulse and respiration were, in some, accelerated, and occasionally great constitutional disturbance took place. At the outset they lay down a great deal—refused food and water—vesicles did not form on the feet of many, and where they did their seat was superior to the claws, generally in front, sometimes extending all around. When they broke they caused great lameness, and emitted a disagreeable stench. In two or three of my patients vesication took place under the abdomen, soon followed by ulcers. In two cases an ichorous discharge was observed from the dew claws down to the other claws, very much like grease from a horse's heel. Those suffered acutely from lameness.

10<sup>th</sup>.—In three or four days the champing and slavering somewhat diminishes, and they begin then to eat and drink a little. The lameness generally exists for a fortnight. In one case the hoofs came gradually off while new ones were growing, the same as in laminitis in the horse. In about a week, marked improvement was frequently seen, and in the majority of cases a fortnight's time left little or nothing the matter. The skin of the tongue, &c. was all formed afresh.

11<sup>th</sup>.—At the outbreak of the disease, fat cows were all bled, with no beneficial effect. Bleeding was resorted to as a preventive. I had occasion to bleed two or three milkers, where the respiration was quickened, and likewise the pulse. One I bled three times, each operation giving great relief, and, previous to which, she lay down, turned her head back against her chest, and groaned very much. This one had obstinate constipation of the intestines for two or three days, which was at length overcome by the exhibition of repeated doses of physic and enemas. I have reason to believe that this cow's stomach and bowels were affected in a manner similar to the mouth and tongue, viz. with vesicles, abrasions, &c.

In a general way, I think blood-letting does no good—rather harm, by debilitating the system too much, especially where the

pulse is not disturbed, for lassitude soon supervenes. Slight costiveness being an invariable concomitant, I exhibit aperient medicines until the bowels are freely relieved. When this object has been accomplished, I have recourse to the vegetable tonics. I order the mouth and feet to be washed with astringents and disinfectants as long as necessary, or until the reparative process commences in the abraded parts.

12*th*.—From ten days to a fortnight, or longer.

13*th*.—Previously answered. All recovered.

15*th*.—None that I can ascertain. If the disease is communicated to the human subject or animals through the medium of the milk, I think that it is where the teats are ulcerated. I omitted to mention that vesicles and abrasions often form on the nipples of milch cows: the matter drops from the sores into the milk pail, which matter may produce the disease under consideration, in the human subject and other animals, by inoculation. In order to guard against this, I recommend a piece of wash leather, cut in the shape of an inverted bell, and made to fit and put on the teats during the process of milking; the milk pail to be held out some distance from the mammæ, in order to prevent the matter dropping into the milk, should any make its way through the leather. The teats are to be stripped.

16*th*.—Neither condition nor age influence the progress of the disease.

17*th*.—I have met with many cases of garget—inflamed udders—in this district, commonly called “white waters,” after recovering from this disease; and some have proved very troublesome cases. These affections seem to me to be connected with the blain, or whatever people think proper to call this disease.

18*th*.—The greatest number improve, thrive, and get on remarkably well after this disease. If, however, the lameness is protracted, they do not. Another exception is, where garget takes place after the other symptoms have disappeared.

The animals that are medically treated thrive faster than those that are left entirely to nature, although some people say that the beasts which are not doctored do best. The fact is, that it is only the worst cases that generally come under the management of the veterinary surgeon. When this disease first broke out in this neighbourhood there were some heifers in a field diseased: they had no assistance rendered them; some became emaciated, and two or three died. Those that did not die were a long time rallying. Other heifers in the same village, belonging to another person, had it. They were professionally treated by me, were well nursed, soon recovered, and afterwards improved amazingly in condition. I am convinced that if medical assistance is early resorted to, the



cows get well sooner; the milk is sooner secreted, and increased in quantity; and these are circumstances of great importance to the dairyman, and in the end prove economical not only to the proprietor of milch cows, but to the owners of fat cattle and store stock.

19th.—I have made repeated inquiries amongst graziers, farmers, and dealers, but cannot learn whether any beast has had the disease a second time. I should think a relapse must be of exceedingly rare occurrence.

I will recite a case where this question has been well put to the test:—A bull, that had the epidemic last spring, was tied up in a shed the whole of the summer, and principally fed on hay and grass that cows would not eat when affected with this disease. It had been in their mouths at the height of disease, and rejected again and again, half masticated and saturated with saliva and the contents of the vesicles in the mouth. He ate it with avidity, and it did not injure him at all. He belonged to a dealer.

I can say nothing about the post-mortem appearances, not having seen an animal affected with this complaint after death. I have been informed, from good authority, that pigs, when killed and eaten, as all fat ones are as soon as they are perceived to have this complaint—I certainly could not relish the bacon—have patches of inflammation on the skin of the belly, and on the outer coat of the stomach and intestines: likewise on the villous coats of each.

## OBSERVATIONS ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Mr. THOMAS DARBY, V.S., of Louth.*

IN answer to your circular, I reply that as the disease still exists in this neighbourhood (Jan. 31st), I thought I had best wait awhile. As I am situated I have the marshes and sea to the east, and the Lincolnshire Wolds west and south. The soil and pasture are various. Of the first beasts that I attended I know nothing of their previous feeding.

The earliest appearance of the epidemic in this neighbourhood was about the middle of last April. The first lot of patients that I attended was twelve cows, belonging to W. Loft, Esq., of Grainthorpe, that had been bought of a jobber a few days before, at Caistor Fair. They appeared to be quite well until about two days after they got to their new home; they then began to foam at the mouth, and I was sent for, the messenger saying that he was



afraid they were poisoned. They very soon got over the complaint, and the weather at this time was very warm. They had been mixed with other beasts belonging to Mr. Lofts, and the same man that attended the sick ones also took care of the others, some of which very soon shewed symptoms of infection. They also very soon got rid of their ailments, and have since been fattened for the market, and obtained a very good price. I do not know that these twelve cows had been previously near any other diseased animals.

Two or three days after this I was sent for by a farmer on the Wolds, to inspect his milch cows that, according to the servant's account, had got poison. There were nine of them. Now these cows had been for a length of time on the same farm, and had never been near any other, nor any other near them. They suffered very much. There had been no disease of the sort in that neighbourhood at the time. After these cows recovered they gave more milk than they had done before, and they do so at the present time.

My opinion is, that this malady is decidedly infectious. I have seen many instances in which diseased beasts have been driven past healthy ones, and healthy ones travel on the same road after diseased ones, and in both cases they have so soon taken the disease, that I can have no doubt about the infectious nature of the malady. I have also seen a lot of diseased beasts in a field with a lot of healthy ones in the adjoining, and the healthy have very quickly become diseased.

On the other hand, in a few instances I have known them altogether resist the disease, after being regularly lodged with the sick. In general, however, I have no doubt that the healthy take the disease from the sick.

In the beasts that I have attended it generally has commenced by foaming at the mouth—the eyes, in a great many cases, partially closed—the hair erect, with stiffness in the hind quarters—disinclination to move—the back bowed up—general costiveness—great prostration of strength; some of them scarcely capable of walking. The feet are also diseased from an early period of the attack.

As to the questions of bleeding and physic, I have seldom found either necessary, *particularly bleeding*.

The general duration of the disease has been from six to ten days. I have had 2800 beasts and about 7000 sheep, and the result has been a very favourable one, not losing more than six beasts, with very few sheep indeed: in fact, the disease, generally speaking, has assumed a mild form in this neighbourhood. I cannot ascertain the number of diseased animals in the country around; but I do not think the general result has been very serious.

Great alteration took place in the milk of some, in others there was scarcely any. In some it was quite putrid, others have yielded nothing but a whey-like fluid, and in a few it has been mixed with blood.

The condition influenced the disease very much. In fat beasts the fever revelled to such a degree that it was difficult to manage them. There I gave physic, but to very little extent. If the air-passages and lungs were disturbed, I passed large setons through the dewlaps, and blistered the throat, varying my treatment according to circumstances, and generally with success. As regards the after-condition, they mended surprisingly fast in the summer time, when fed on green food: but they improve much more slowly in their stalls. I have known about half a dozen secondary cases, but in a very mild form, generally giving way to one dose of medicine. A great many persons in this neighbourhood have not given any medicine at all, leaving their patients entirely to the efforts of Nature: but in a great many instances of this kind I have observed she has not had sufficient power to throw off the malady; and, no assistance being given, chronic disease of either the lungs or the liver, or both, has been the consequence. Some of them have suffered from bronchitis and hoose, and others have been attacked by violent purging, and even by dysentery.

The medicine that I generally gave was an aperient, combined with a sedative, and followed by a vegetable tonic.

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## OBSERVATIONS ON THE PRESENT EPIDEMIC.

*By Mr. G. BAKER, M.R.C.S. and V.S., Reigate.*

THE epidemic in question has not here assumed that serious or malignant character which has marked its progress in many places; but in our neighbourhood, generally, has manifested itself in a mild form, although most of the usual symptoms described by so many who have written on the subject were present, yet of a mitigated character. In some there was the depressed countenance and unhealthy appearance of the coat—the sunken eye—the hurried breathing and increased pulse—the ulcerated condition of the lining membrane of the mouth—the difficult and imperfect power of mastication and deglutition—diminution or total loss of appetite—the fœtid breath—the rigidity of the limbs, which were sometimes tender and œdematous—the indurated, painful, and swollen state of the udder—the decreased quantity of milk—the restlessness and un-



easiness in the feet; and frequently constipation of the bowels, though in some this last stated was reversed, and diarrhoea supervened.

I invariably commenced my treatment by abstracting blood to a greater or less amount, regulated by the severity of the symptoms and the age and condition of my patient; and here I would remark, that no man can determine any prescribed amount to be taken away: it must be left to the observant practitioner to let his practical knowledge decide him. After this operation, I have administered magn. sulph.  $\mathfrak{z}\text{iv}$ , sulph. subl.  $\mathfrak{z}\text{j}$ , p. potass. nitr.  $\mathfrak{z}\text{ss}$ , in gruel, using a solution of the chloride of lime, in which was mixed a little honey, as a lotion to the ulcerated mouth. The feet, where occasion required, were dressed with a solution of chloride of lime, and, afterwards, linseed meal poultices applied. My patients have all certainly been in good condition, well pastured; in fact, well fed, and have all of them recovered. In a few days the milk has returned, and the appetite been restored. Where the udder has been much swollen, tender, and hard, it is advisable to use a fomentation of the poppy heads and chamomile flowers; but, unless it is painful to the touch, and much heat in it, we shall do well not to regard a little increased size. It will go down gradually as the other symptoms disappear.

In the horse I have had very many cases under my care, although the symptoms are not exactly those corresponding with the cow; and here I must observe, that in but comparatively few have I witnessed *precisely* the same symptoms, although in all there has been a prominent character identifying the disease. It is usually ushered in by slight chills, depressed appearance, sudden and great prostration of strength; the pulse quickened; the mouth and tongue dry and hot; eyelids much swollen and closed; great weeping from the eyes; sometimes a discharge from one or both nostrils, and tinged occasionally with blood; frequent enlargement of the parotid and submaxillary glands; inflammation and soreness on the top of the pharynx and larynx, and along the course of the œsophagus; frequent cough, and difficult deglutition; disturbed respiration; the food and drink returned through the nostrils; great stiffness and tenderness of the extremities, and, sometimes, œdema; great aversion to motion.

These symptoms appeared in various degrees and combinations as the violence of the disease fell more particularly upon the mucous membrane, in the head, in the throat and chest, or in the bowels.

I am fully assured that the utmost benefit is derived from blood-letting, particularly if we have the opportunity of seeing our patient in the early stage of the attack; but I dread the use of physic, and



have never employed it but with increase to the severity of the symptoms and danger to the animal. There appears a morbid determination to the intestinal canal in many cases, even from the beginning; and although a spontaneous diarrhœa may now and then relieve the head and abate the symptoms generally, it is far from being a salutary effort to unload the system in that way, and I believe requires the most especial care in our treatment, and the utmost caution and judgment ere we determine the course to pursue. To allay the irritated condition of the bowels, and keep up a necessary action, I employ injections, which succeed admirably; and to soothe the febrile symptoms, I give p. potass. nitr. ʒij, camph. ʒss, antim. tart. ʒss, in a ball twice a day. The nose-bag will be found, in many cases, a valuable adjuvant, containing a warm mash, and where the indications call for it, a hot sheep-skin applied over the loins, the legs, of course, being well rubbed and bandaged to equalize the heat. Blisters to the sides and chest, and the insertion of a rowel or seton should be resorted to if we anticipate any serious inflammatory determination to the lungs, &c.

It certainly, in my opinion, cannot be regarded generally as a contagious disease; but owing to some general cause, either originating or subsisting in the atmosphere, and depending on its sudden changes, the spread of this epidemic over the country has been so general, that I cannot believe its rapid propagation could be caused by intercourse. All have been, and under all circumstances and conditions, subjected to its prevailing influence, from the "patriarch of his breed" to the youngest scion,

By spur and bridle undefiled,  
And feet that iron never shod,  
And flanks unscar'd by spur or rod.

Another circumstance that strengthens my incredulity is the curious fact of the influence which the general cause that produces this epidemic seems to exert over the animal body with regard to other diseases; and again, I have found, in my practice, that the horses most subjected to its attack are those who work hard, such as post and coach horses. I have also had two or three of one team, who have journeyed together over the same stage, taken very ill with it; and, although they stood regularly in a stable with other horses, and worked the same coach on a different line of road, but one only of these at last failed with it, and then was merely slightly attacked: horses, however, that worked in the stead of those ill were, after a journey or two, likewise obliged to be rested from the same prevailing cause. The post horses have in this neighbourhood, nearly all of them, been visited with the complaint in greater or less severity, which, considering they travel to all neigh-

bouring districts, is no great wonder, and progressing as does this epidemic condition from place to place, and country to country. I have known it return on some who have been previously affected, and with increased intensity; nor do I consider the bare fact of having been once the subject of its influence or power in any way secures from a renewal of the attack.

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## OBSERVATIONS ON THE PRESENT EPIDEMIC.

*By Mr. CHARLES DICKENS, V.S., Kimbolton.*

I AM fearful that ere this you will have said that one who is always ready to lend a helping hand has forgotten to reply to your queries. Not so! but from numerous causes I have been prevented from communicating with you, and now, I can give you little more than you are already in possession of through my paper in *THE VETERINARIAN* for November.

I have little cause to alter any opinions there expressed. The disease kept raging with us until the beginning of December. A little while after that I had not a case upon my list. I have had from a thousand to fourteen hundred patients, and whether my principle has been right or wrong, I am thankful to say that my practice has been highly successful. When I say this, I confine myself to cattle, for the horse had not then begun to suffer.

I trust the agricultural world will evince their sense of gratitude to the profession for its successful treatment; for although many of them who ought to know better do make a boast of having done without professional aid, they forget that, to the improved veterinary knowledge which has been diffused, they owe all that they know about the subject.

In answer to some of your queries I reply:

1. I have found it attack our cattle, more or less, in all situations, whether tied up, or in meadows or upland.

3. The first appearance in my neighbourhood was in February 1840.

4. Mild. No symptoms of disease on them when purchased.

8. My opinion is, that it is decidedly contagious; and I think that opinion will be borne out by reference to my former paper. As to infection, I am yet doubtful.

9. Generally in the mouth first, but not always: the animals that were lame invariably suffered less from disease in the mouth.

11. My grand object and sheet anchor of practice has been to get the *fæces pultaceous*. I bled none, except now and then in a case in which the chest was the principal seat of disease, and then cautiously.

12. I should say convalescent in from 4 to 7 days.

15. There was either a partial or perfect cessation for a time, and in many cases not again returning in any thing like the original quantity.

16. I have observed that store beasts in good heart bore it best; very poor stock bore it badly: old cows suffered much, but the greatest danger existed with cows in full milk, or down calving.

18. I have already stated that many of my patients did much better after it, and are still going on well, except in bad cases of lameness, or inflamed bag.

19. I have not seen it sufficiently marked to satisfy myself here. I think there is much gross blundering. I have lately had two beasts tied up that had it in the spring, among many others that have suffered much. They have escaped—they ate and drank with the others. I think if we were to watch narrowly we should find but few instances indeed in which they have it twice.

There is an opinion amongst many farmers, backed by some veterinary surgeons and medical men, that the milk from the diseased cow was the cause of the disease in pigs. I do not believe that it was to be thus conveyed. I know an instance of a lot of pigs that were bought purposely to give the diseased milk to. They were kept entirely upon it for six weeks, and not one suffered. No! They are affected by some external agent. I saw the fowls bad with it in one yard—and some died. I merely send you this little incident, because I know that you will attach the proper weight to it.

To a man who suffers, at times, as you do, I cannot close this communication better than by saying, *good* health to you, and to all bipeds and quadrupeds that belong to you.

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## ON THE PREVAILING EPIDEMIC AMONGST CATTLE, SHEEP, &c.

*By Mr. T. MAYER, V.S., Newcastle-under-Line.*

[The *Mark Lane Express*, of January the 25th and February the 1st, contains two excellent letters from Mr. Mayer, sen., V.S., of Newcastle-under-Line, on the Epidemic prevailing among Cattle and Sheep, and written for that paper at the request of a noble and influential agriculturist in the county of Stafford. Whether we should have said all that he has done on certain points is a question which we will not agitate at present. The Essays are highly creditable to the writer, and to the profession; and we most cordially recommend them to the perusal of our brethren.—Y.]



*To the Editor of "The Mark Lane Express."*

Sir,—At a time when the agricultural community are suffering so much from the ravages committed on their stock by this troublesome pest, I have considered it a public duty to trouble you with a few observations relative to its history in this locality, its nature and treatment; as in too many districts throughout the kingdom the farmer has not the services of a veterinary surgeon at his command; and I am only sorry my having professional engagements for the last three months have prevented me from doing it sooner.

This disease is one *sui generis*, and, as far as my reading and observation go, has never prevailed in this kingdom before; therefore, to style it the murrain, or blain, is highly incorrect, and carries very erroneous ideas along with it, both as to its nature and treatment. It has been asserted that our continental neighbours have long been conversant with the disease, and consequently that it must have been imported into this country through the medium of stock purchased abroad. I very much question the correctness of this view, for, was it the fact, it must have naturally found its way among us long ago.

I have a vague idea that it was first perceived in the county of Norfolk; and it would be conferring information of great value, if some of my professional brethren, or some of the eminent and talented agriculturists which that county boasts of, would, through the medium of your valuable journal, afford us correct data relative to this point. We have reason to believe that my friend, Mr. Youatt, will concentrate and mould into a proper form every thing worthy of the history, nature, and treatment of this epidemic as communicated to him by his veterinary brethren. In his able hands we may rest assured full justice will be done the subject.

When we reflect upon the series of unprecedented wet seasons we have experienced up to the spring of 1840, the consequent badness of fodder and grain, the saturated state of the earth with moisture, and the consequent decomposition of vegetable matter exhaling its poisonous miasma into the circumambient air—when we also take into consideration the extreme fluctuations of barometrical pressure, as well as the sudden transition of heat to cold, and *vice versa*, through the same period, all developing how very powerfully and extensively that mighty and irresistible disintegrating agent electricity, extends her sway over all the hidden and secret operations of nature in the great laboratory of our wise and beneficent Creator—we cannot feel surprised that disease and death, in every varied form, should be evolved in the poor fragile frames of the animal creation.

It is of a highly contagious nature; so much so, that it was no uncommon occurrence to witness a herd of from thirty to sixty head

of cattle falling prostrate before its baneful influence in the short space of a fortnight. Its infectious properties extend to all the cloven-footed and ruminating tribe, but not to the human subject, nor the horse and dog. On one occasion a poor man's cow came to my establishment labouring under the disease, and was very inadvertently put into my cowhouse to have its feet properly examined and pared out: although my own cow was out in the field at the time, and only tied up at night, yet the disease developed itself in four or five days by tenderness in her feet, followed by the affection of the mouth, and accompanied by the general febrile symptoms.

A very erroneous idea has gone abroad, that the pigs have taken the disease from partaking of the milk of the infected cows; but they have simply become affected upon the same principle as sheep, by having been allowed to come in contact with them, or to follow after them in the pastures or straw-yards where they have been turned out. Pigs and calves, as a matter of experiment, have been fed with the milk of infected animals, but kept out of the sphere of the contagion, and have not been the least affected. My own family, including a child twelve months old, partook of the milk and cream of my own infected animal (being old, milched, and near calving, we gathered no butter) without experiencing any injurious effect. The loss, therefore, to the kingdom in butter and cheese, by the milk having been unnecessarily sacrificed, has been immense in amount; it is only where particular cows' udders are labouring under an attack of inflammation, or what is called gargeted, that the milk is required to be flung away.

Wherever this disease has assumed its epidemic form (as in our district) like the cholera, it appears uninfluenced in its freaks by either weather, locality, soil, pasture, or previous feeding—affecting the poor as well as the well-conditioned animal, the old as well as the young, without distinction; but I consider those cows which were the best milkers, and in full milking at the time of attack, as experiencing it more severely than others. It made its first appearance in the northern parts of Staffordshire, near Uttoxeter, at a few insulated farms during the spring of last year, in consequence of some diseased cattle, purchased at Uttoxeter fair, and introduced into their respective herds, to which localities it was confined; nor was it till last autumn that it assumed its epidemic form amongst us, when it involved in its attacks both sheep and pigs; at the same time an epidemic fever, of a virulent and highly infectious nature, broke out amongst the horses of the district, seldom sparing a single horse in any establishment, however numerous, from its attack. The same epidemic amongst horses traversed the kingdom in 1825-26, and then passed over into France, where it swept off



some of the best horses in the king of France's stud, and, in fact, committed sad ravages everywhere; but at the same time there was no particular epidemic amongst cattle. It had no connexion with other diseases, and where the animals passed through it moderately, and were properly treated, their condition was not much affected, but they seemed to grow much faster and better afterwards from their course of medicine. In those instances where the feet suffered much, the condition was rapidly lost, and long in being recovered again. In one instance which came under our eye, the animal had the disease twice over; but we considered it an exception to a general law in nature, that peculiar contagious fevers cannot affect the same system twice over; however, it requires a more extended series of observations than I can furnish to set this point right.

There are many strong facts which fully bear out the opinion, that healthy animals traversing the roads already tainted by infected animals having travelled along them, have taken the disease, on the same principle as a sheep-walk infected with the foot-rot shall communicate the disease to an healthy flock turned out upon the same beat. This points out how cautious noblemen and gentlemen possessing deer in their parks should be in not allowing infected herds of cattle, or flocks of sheep, to pass along them. I consider, too, that it is capable of being conveyed by parties in attendance on diseased stock to healthy herds.

*Symptoms.*—The first symptoms which perceptibly shewed themselves were generally lameness in one or more of the feet, accompanied with much heat around the hoof, fetlock, and coronet, with a fulness and swelling often of one or more of the legs; this was immediately followed by a flow of saliva from the mouth, accompanied with a champing motion of the jaw. On examination, the mouth and tongue were full of ulcers, particularly under the pad of the upper jaw, the ulcers extending over the top of the nose: if on examining the mouth you took hold of the tongue, it was no unusual occurrence to find the cuticle covering it raised up into a white blister, and the whole of it stripped off in your hands, leaving the tongue in appearance like one that had been boiled and the skin peeled off. In some instances, the affection of the mouth, and consequent flow of saliva, would precede the affection of the feet, but not as a general rule. The cow became dull and off its feed, looking anxious and sunk in the eye, the secretion of milk diminished; the ears and horns were sometimes hot, at others cold; the bowels constipated, the faecal discharge looking on its outer part dark and glistening, and as if half baked, shewing the hot and inflammatory state of the alimentary canal; the pulse ranged from 50 to 70. In two or three days after the lameness occurred, an ichorous dis-



charge took place between the claws, at the back part of the heels, and in front of the hoofs, betwixt hair and hoof, the ulceration extending often very far under the sole of the foot: those cows did best where the discharge came on early but moderately. In some there was so much pain and tenderness of the feet that the beast could not stand up, accompanied with evident sympathetic fever, but no discharge. In these cases matter became formed under the bottom or sole of the foot, requiring very free paring to set it at liberty. In others, the ulcerative process and discharge would occur extensively and deeply under the horny covering, so that the hoofs would come off, if the diseased action was not corrected by free paring and proper dressings: here the fever also ran very high, accompanied with very rapid emaciation of the animal. In some instances the mammary glands were attacked with violent inflammation, which terminated in mortification; at others, the connecting cellular membrane of a limb would be the seat of inflammation, which would either end in mortification, or extensive formations of matter or pus amongst the interstices of the muscles. Fortunately these extreme cases were rare, and it was evident that the disease, as it prevails among us, had assumed a much milder type than during its early career. The malady consists in a highly contagious inflammatory fever, possessing an erysipelatous type, consequently bearing bleeding ill, and affecting particularly the mucous and secreting tissues. In its regular form it runs its course in a fortnight, the animal becoming convalescent, and fit to turn out gradually in the daytime, if fine, at the end of three weeks. I generally found the pulse to subside gradually to its regular standard from the end of the fifth and seventh day.

*Treatment.*—A more judicious general outline of treatment cannot be adopted than the one recommended by Professor Sewell to the notice of the English Agricultural Society. Equally so, upon the same principle, is that of the Earl of Surry, as published in your valuable Journal for the benefit of his tenantry and the community at large. Looking at the disease as an inflammatory affection of the mucous membranes, particularly of the lining membranes of the mouth, stomach, and intestines, the treatment cannot be too mild; therefore *drastic purgatives* are inadmissible, and fatal in their consequences. I accordingly simply ordered a quarter of a pound of Glauber's salts to be administered once or twice a-day, dissolved in a pint of warm water, to which was added a quarter of a pint of cold-drawn linseed oil, just to keep the bowels soluble, but not to purge or irritate them. This was continued for a fortnight. During the third week it was only given every other day, and in the generality of cases was seldom required beyond the latter period. Bleeding was not had recourse to unless there was much sympa-

thetic fever evinced by quickness of breathing, and an increased frequency of the pulse, often arising from great pain in one or more feet. The abstraction of four quarts of blood, repeating it if necessary the next day, generally took this off: at the same time fomenting the feet in tepid water twice a-day, and immersing them in bran poultices. But the poultices must not be had recourse to as a general rule, being objectionable on account of the ligatures employed to keep them on, and also from having a tendency to promote the ulcerative process. The ulcerated parts of the feet should have the detached horn *moderately* pared off; but where slightly affected, they do best without paring at all. On the other hand, where they are badly affected, and the ulcerative process has gone on deeply under the sole, free paring must be resorted to; the parts affected must be washed daily with a strong solution of blue vitriol, and, where free paring has been employed, they should be smeared over with warm tar, or else, if very bad, have pledgets of tow soaked in the melted tar and fastened *easy on*. The mouths should be dressed daily with a strong solution of common alum and water. This plan of treatment will be sufficient to restore the greater bulk of the infected animals with little or no deterioration of condition; but in many instances they will come out of the course of medicine much improved in their general appearance. We had on one occasion thirty-three head of stock under our care, belonging to Mr. Lewis, the esteemed and respected steward of his Grace the Duke of Sutherland, twenty-seven of which he had just bought in for feeding. When they arrived home, four or five were found lame, and although they were turned by themselves into a straw-yard, yet the whole were infected in a little more than a fortnight. In three weeks from each cow's attack, they were by the above treatment £2 a-head better in their appearance and condition. I have no doubt they would become ripe for the butcher earlier than if they had not been attacked by the disease; simply from the impetus given to their constitutional powers, arising out of the thorough course of medicine the system had undergone. However, there are always more or less of complicated cases arising, which will require all the skill and tact of a regular veterinary surgeon to manage successfully; therefore the agriculturist will do well, where practicable, not to neglect availing himself of the *general surveillance* of such a man, when his cattle are attacked.

The pigs were affected similarly to the cattle, but ran through the disease more mildly, although in many instances their hooves came off; but by dressing as directed for the cattle, the feet soon hardened and did well. The mouths were washed daily with the solution of alum; and internally, from one to two ounces of Glauber's salts dissolved in water, according to the size of the pig, was

administered in their food: they were convalescent in a fortnight or three weeks. My observations relative to sheep I will give you in another paper; I can only observe here, that Glauber's salts were found prejudicial to them, and that they required the treatment, to my surprise, to be modified accordingly.

I remain, Sir, your, &c.

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## ON THE EPIDEMIC, AND INFLUENZA AMONG SHEEP.

*By the same.*

*To the Editor of "The Mark Lane Express."*

Sir,—AT the same period when the epidemic pervaded the cattle of this district, it gradually developed itself amongst the flocks of sheep, to the serious cost and disappointment of the farmer. It was a singular circumstance that, at the time when it was raging as an epidemic down in Cheshire and up in Derbyshire, bordering on the northern part of Staffordshire, we had not a solitary case in the neighbourhood, and had a sanitary *cordon* been drawn around us, it would not have been more effectually shut out; nor was it until some of those inexplicable, mysterious, and inscrutable changes occurred in our atmosphere as autumn approached (and which set at defiance all the resources of science for detection and a satisfactory explanation), that the disease assumed its epidemic character. These atmospheric influences operate powerfully upon the animal economy, tending to change the healthy action of the system, and destroy its delicately and wonderfully balanced operations, and thus predispose the body to take on disease.

The symptoms of the disease in sheep correspond exactly with those in the cow and pigs; but they suffered more severely in their feet than the pigs, and equally as much as the cattle, the hoofs coming off more extensively than in either of the other two. The disease pursued equally the same course as in cattle, commencing in their feet. In one large flock the influenza broke out among them, accompanied with an affection of the feet similar to what occurred in the epidemic; but they had none of the other characteristic symptoms of the latter disease; we therefore considered it as arising out of having travelled 300 or 400 miles into this district, from its occurring in the feet immediately afterwards: but the influenza did not occur among them until some weeks after their



arrival. While this flock of poor sheep was labouring under the influenza, another flock of fattened sheep, resident upon the same domain but kept quite distinct, commenced with all the characterized symptoms of the epidemic.

The influenza evinced itself at first by a hoarse or cough, and heaviness and running of the eyes and nose. As the disease advanced, they lost their appetite, retired apart from the flock, constantly lying down; the bowels became constipated, and the breathing quick, and if not timely relieved by proper remedial means they soon died. I have understood that vast ravages were committed among the Lincolnshire flocks, accompanied with great fatality: it must, I think, have been this disease, and which probably was treated upon the same principles as the epidemic of cattle; if so, it would be sure to be attended with fatal consequences. On a post-mortem examination, we found general inflammation throughout all the viscera of the chest and abdomen, but more particularly upon the lungs and air-passages; the heart and pericardium were in some cases much inflamed, accompanied with an effusion of bloody serum into the heart-bag; in others, effusion of water or matter occurred in the cavities of the chest; in some there were extensive adhesions of the lungs to the pleura lining the ribs; in other cases the disease terminated in a gangrenous state of the lungs, the liver being also much implicated in the general mass of disease, and all the mucous membranes of the bowels being much inflamed. On taking the skin off the animal, there were erysipelatous patches and lines of inflammation running up the limbs, along the sides, and under the belly, accompanied with œdema or swelling, presenting just the appearance of what we find in calves that are struck. The caul, in some, was like a mass or layer of black coagulated blood, diffused over the surface of the intestines. In a few cases, the heart was much softened, and very flabby, readily accounting for the sudden manner in which some died. It was no unusual thing for the shepherd to leave his flock in the morning free, *to appearance*, from any immediate danger, and to find, on his return in the afternoon, two or three dead; or, perhaps, he might be standing amongst his flock when first turned out in the morning to range the pastures, and suddenly his attention would be arrested by one or two of the sheep reeling and staggering along a few paces, and dropping down dead, no doubt from an affection of the heart.

*Treatment.*—At first they were treated upon the same principle as the cattle and pigs; but the salts proved very injurious, and too cold, occasioning, in some instances, a metastasis, or change of attack on the part of the disease to the heart, followed by immediate death; or else, if purging took place, they sunk away rapidly;

we were therefore compelled to modify the general treatment, which then answered very well, both as regards the epidemic as well as the influenza. Instead of purging salts, we daily administered to each sheep from half a drachm to a drachm of saltpetre, dissolved in a wine-glass of water, to which was added a wine-glass of cold-drawn linseed oil. The mouth and feet were treated the same as in cattle. In cases of influenza, where there is quickness of breathing, half a pint of blood should be abstracted, and repeated the next day if necessary, either by bleeding at the nostrils, or under the eyes, or else at the jugular vein. Should the linseed oil not be adequate to remove the constipation of the bowels, ten grains of rhubarb may be added to the other medicine, and repeated every other day, or according to circumstances; but purging must be avoided, as it either, when once set in, becomes uncontrollable, or else the animal rapidly sinks under the debilitating effects of it.

The most simple way of regulating the doses of saltpetre is, by putting into a quart bottle of water one ounce of the salt for half drachm doses, or else two ounces of it for drachm doses, dividing the quart mixture into sixteen doses. The above treatment will be found safe and effectual in the epidemic, and as successful as any in influenza; but the latter disease is of a more complicated and dangerous nature, and there will be cases which will baffle all treatment. Where, in influenza, there is a discharge like glue, sticking to the nostrils, and very fetid, twenty drops of sweet spirits of nitre should be added to the daily dose of the mixture; if diarrhœa occurs, it must be stopped by giving wheat-flour gruel, thickened with starch, to which may be added chalk and a little cinnamon. The sheep should be penned at night, or put under airy sheds, so as to be kept dry and comfortable, with plenty of fresh dry straw under them; they should be foddered with good choice hay, and those that will not eat must be kept upon oatmeal gruel horned into them. When fine, they must be turned out, but not until the frost or dew is off the ground, and the sun well up, taking care to pen them up early in the afternoon, as soon as the sun is sinking down in the west.

I forgot to state in my paper on cattle, that they should be dieted with nice choice hay, or, according to the season of the year, grass or young clover, cut turnips, and bran mash; but when their mouths are so bad as to prevent their feeding, they must be nursed with oatmeal gruel and linseed tea, giving them oatmeal to drink in their water.

In conclusion, allow me to return you thanks for your kind insertion of my papers in your valuable Journal. I trust they may be found of service to the parties they are intended for. At any rate, I have had the pleasing task of attempting to do that duty which

our profession owes to the agricultural community in their hour of need, and at a time when the interests of the agriculturist and the veterinary surgeon are rapidly becoming more blended.

I remain, dear Sir, your's, &c.

THOS. MAYER, sen., V.S.

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## ON THE INFLUENZA IN HORSES.

*By Mr. W. HAYCOCK, V.S., Huddersfield.*

ALTHOUGH I have not at any previous period offered a communication to your Journal, I yet venture to send the following remarks upon "influenza," a disease at present very prevalent among horses; and which, from what I learn by THE VETERINARIAN, has lately engaged the argumentative powers of your "Association."

If we take into due consideration every symptom under which influenza in horses is presented, we shall find that it naturally divides itself into two very distinct states or conditions—a fact which does not appear to have received sufficient notice by those who have spoken or written upon the subject. This I conceive to be, in a great measure, the cause of the wide difference in opinion that appears to exist among veterinarians respecting its medical treatment.

Mr. Stewart, late of the Andersonian University, was, I believe, the first to suggest a distinction. He divides the disease into two states, and describes them under the respective heads of "cephalic and thoracic influenza." This division does not appear sufficiently comprehensive, at least if we apply the terms to the influenza which prevails at present. I propose, therefore, to substitute the following; viz., œdematic and bronchial or nervous influenza, as being more definite and expressive.

An animal may be affected with the disease in either state separately, or with both combined; or one state may terminate, and the other immediately succeed. I will therefore describe the symptoms attendant upon each condition as I have found them to exist in my own practice; and conclude with laying before you the mode of treatment I have pursued, and the results which have followed.

*Œdematic influenza* is characterized by staring of the coat; the eyelids greatly swollen—in many instances so extremely bad that the animal appears totally blind—accompanied by a copious secretion of tears, or of a thick acrid matter of a yellowish colour. The



mouth dry and hot, with, at times, intense redness of the palate and tongue, as if the animal had swallowed some fiery mixture. The membrane lining the nose sometimes highly coloured, and at other times much paler than natural. The nose, lips, body, and limbs largely swollen, attended with alternate and rapid changes from hot to cold. In some cases, swelling of the submaxillary glands, and, in consequence, a slight difficulty in swallowing. The pulse generally bounding and wiry, and ranging from 60 to 68. The blood when drawn slightly buffy, and taking a longer time than usual to set. The appetite somewhat impaired. The fæces, in most cases, healthy in appearance, and regularly discharged. The strength and movements of the animal never affected, except where a combination of the two states exist.

The symptoms of the *bronchial* or *nervous* condition are in most respects quite opposite to the above. The eyelids are entirely free from swelling, and there is no discharge from the eyes. The extremities likewise free from all engorgements; the hair appearing fine and glossy, as in pneumonia; free as well from alternate changes of temperature, but generally at a very low heat. The membrane lining the nose intensely red, and in many instances passing into a dark purple hue. The palate, tongue, and mouth not hot (at least in a majority of cases), but covered with a white soapy kind of matter, of great tenacity, and generally of a very sour smell. The appetite not partially but wholly gone. The fæces small, round, and hard, and sometimes coated with a yellow mucous matter, discharged irregularly and in small quantities. The pulse changeable, but generally beating from 80 to 90; very soft and feeble; while in many instances it cannot be felt at all. The blood when drawn presents no buffy coat; is very thin and watery and pale in colour\*. The breathing slightly quickened, though not constantly so, except when the animal is moved, and then it rapidly increases, and takes a long period to settle again. Stiffness and weakness to a most frightful extent always exists, and the countenance of the animal wears a peculiar anxious look. Soreness is evinced about the chest and neighbouring parts, especially during a fit of coughing. In short, great irritation appears to extend along the trachea and bronchial tubes, without at all affecting the substance of the lungs; at least, I have not detected any symptoms to that effect.

Such, then, being the symptoms exhibited in each stage of the disease, that a division is demanded, no one, I think, will dispute.

\* These appearances existed in every case where I abstracted blood; but the practice of bleeding for this state of the disease I soon abandoned, so that I cannot state for fact that they would exist in all cases.

Two different portions of the animal economy are deranged; the former or “œdematic influenza,” I view as a disease of the skin and its appendages. The circulation has become unequal—the invisible perspiration is suddenly checked—hence derangement in the absorbent system, and those swellings which extend over the body and extremities. The latter condition I consider a pure nervous disease. The functions of the sympathetic and voluntary nerves are suspended or deranged; from which arises the stiffness—loss of strength—loss of appetite—general derangement of the digestive organs, and perhaps even death.

If, then, we view the disease in the above states or conditions, and at the same time take into consideration the careless manner in which they appear hitherto to have been overlooked, we cease at once to marvel why veterinary surgeons differ so extremely in their opinions respecting its treatment. I assert that the two states are widely different, and consequently require a wide difference in medical treatment. On this I base the assumption that, for the want of due observance being paid to the disease in its two conditions, has arisen, if not wholly, at least in a great measure, the endless difference respecting the most proper mode to combat it. However, setting aside any farther remarks upon this portion of our subject, I may conclude by stating, that upon the treatment of no other disease do the veterinary body differ so widely; and whether this difference arises from the cause I assume, or from another not yet hit upon, I leave to be decided by those who may choose to speculate about it.

*Medical Treatment.*—Should the animal be affected with the œdematic state, I always abstract blood, the quantity taken depending upon the symptoms, constitution, and condition of the animal. I direct the extremities (continuing the operation until the symptoms are abated) to be well fomented with warm water, afterwards rubbed quite dry, and bandaged. I then divide the following into four doses, giving one in a little warm water with the horn, at each end of the day, and if possible upon an empty stomach:

Antim. potassio tartrat. ....	3xij
Potass. nitratis. ....	3xij.

Four doses, or at the most eight, I, in general, find sufficient to restore the animal; in some cases, however, I have given a gentle laxative, containing three drachms of aloes, and with decided benefit. The animal's food and drink to consist of bran mash, boiled oats, and linseed, carrots, a little good old hay, and plenty of thin warm gruel. The above measures I have found to be the

most efficient in combatting this state of the disease. I tried the stimulating plan, but the fever I found began to spread, and my patients to grow worse.

In the "*bronchial or nervous state*," I find every symptom forbidding the least blood to be abstracted. I bled a few so affected when it first became prevalent in this part, but I quickly abandoned the practice; the animals, in consequence of bleeding, becoming so dreadfully reduced, that it was with the greatest difficulty, and the most decisive measures on my part, that they were again restored. I adopted, therefore, the opposite plan, viz., the stimulating one, and I have found it to succeed beyond my highest hopes.

I have given regularly the following twice every day until restoration took place:—

Zingiberis. ....	℥j
Pulvis gentianæ .....	℥j
Spts. æth. nit. ....	℥ij.

The whole of the above was mixed with the contents of a large bottle of the best London porter; and should the sour smell which I beforementioned exist to any extent, I give in addition three or four drachms of prepared chalk. I direct the extremities likewise in this state to be frequently fomented, handrubbed, and afterwards bandaged with thick woollen bandages. Clysters to be frequently administered, composed of thin gruel, oil, and a little ammonia to make the two combine. Mash—boiled corn and carrots to be offered, though it is seldom that any is taken. Linseed gruel is given with the horn if the patients refuse to drink it, and in many extreme cases I have had given every day for a few days two or three quarts of milk, fresh taken from the cow. This they have freely drunk, after refusing every other article of food which was offered. When great soreness is present in the chest, I in general place a broad seton on each side, and dress with the resin ointment. Should a discharge take place, the improvement soon becomes evident. I have the animal warmly clothed, placed in a loose box, and plenty of dry straw constantly spread, though it is seldom the patient will lie down\*.

The above, then, constitutes my whole system of treatment. Perhaps it may be said, that I give most enormous doses. To this I reply (speaking more especially of the bronchial state), that, if I had not done so, many of my patients would positively have died. I have used these measures in above fifty cases, and I have had

\* I should have mentioned previously, that all animals affected with the œdematic state lie down regularly.



only two deaths, both of which were old animals, and, for a long time previously, they had shewn very marked symptoms of decay.

One was an old pony, the property of J. Crowther, Esq., of Newtown Mills, near Huddersfield. The animal was seized first with the œdematic state. Bleeding and the other remedies which I have mentioned were resorted to, and the animal at one time appeared recovering. The œdema of the body and extremities gradually disappeared; when the nervous state suddenly supervened, and, in spite of every effort, death took place six days afterwards.

*Examination twenty-four hours after death.*—Inflammation had extended throughout the whole of the intestines, particularly the large ones. They were of a dark (nearly black) brown. The sides of the diaphragm, the pleura, and the surface of the lungs, were of a grass-green colour. The surface of the lungs was corrugated, or shrivelled—much flattened, and apparently diminished to about half their natural size. On cutting into their substance, some portions were hepatized, while others were like a sponge, filled with black blood, and a frothy fluid of strong tenacity. The bronchial tubes (particularly one) appeared much enlarged, and gangrenous throughout. In about an hour, when thrown upon a heap, they appeared a putrid mass, devoid of form and elasticity. The heart was very large, much softened in texture, and pale in colour. The liver was sound, at least sounder than any other part I examined. From the morbid appearance of the intestines, the animal must have suffered acutely; yet it is, perhaps, worthy of remark that no symptoms to that effect were shewn when alive.

The second which died was an aged draught horse, belonging to Messrs. Carver, Driver, and Co., carriers of this town. The disease, or rather diseases in this case, were nervous influenza, combined with inflammation on the lungs. The animal was taken ill on the 2d of January last, and continued to get gradually worse until the 6th, when he dropped and died, almost without a struggle.

Fourteen hours after death the following appearances were presented:—The intestines were of a dull brown colour throughout, very dry, and shrunk in size. The liver exhibited no marks of disease. The lungs were of full size, but much higher in colour than natural. The middle of the near lung was hepatized, which plainly pointed out the seat of the inflammation. When cutting into their substance, a frothy colourless fluid flowed copiously on withdrawing the knife. The frothy fluid existed likewise in great quantities in the bronchial tubes, many of the smaller ones in particular, being completely choaked up. The lower part of the trachea (for about half its length) was internally of a deep red colour. The pleura, the liver, and the heart, appeared sound.

Inflammation in this case was evidently in its first and second

stages, and, judging also from the morbid appearance presented by the other parts, we may conclude that a decay had taken place throughout the system. Indeed (as I have before observed), for some time previously, marked symptoms were shewn of decay; a very gradual wasting of flesh and of strength; stiffness in the hind extremities, deepening of the cavities above the eyes, as well as sinking of the eyes; no wonder, therefore, that the animal died, labouring, as it evidently did, under every disadvantage, or, in other words, under two diseases, each requiring a mode of treatment diametrically opposite to the other.

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## ON THE EPIDEMIC AMONG CATTLE, SHEEP, AND PIGS.

*By Mr. W. F. KARKEEK, V.S., Truro.*

My dear Sir,—I WILL now endeavour briefly to answer your queries relative to the “Epidemic” among cattle, sheep, and pigs, in my neighbourhood.

1. It has prevailed chiefly in three or four parishes, situated about the centre of the county of Cornwall, and embracing a circuit of nearly fifteen miles.

2. The soil lies on the clay slate chiefly, and may be considered to be as highly cultivated as any part of the kingdom. Most of the cattle had been housed previous to the attack, and had been feeding on turnips.

3. About the 3d day of December last.

4. During the continuance of the disease we have had every variety of weather, rain, frost, snow, storms, fine, changeable, rain, snow, frost, storms, fine weather; changes that would have puzzled Mr. Murphy himself to describe, or even that prince of astrologers, Francis Moore, physician.

5. Previous to the 1st of December, I believe that I am correct in stating that we had not a single case in my district. There may have been some few in the neighbourhood, bordering on Devonshire; but I never heard of any.

On the 1st of December there was a fair of cattle held at St. Austle, to which several cattle were brought either from Devon or Somerset, for sale. These were chiefly purchased by a few farmers; and in about three or four days at the utmost this epidemic was observed in each of the farms to which these strange cattle had been taken. Other cattle that were exposed for sale, and that

stood alongside of the eastern cattle in the fair, shewed symptoms of the disease also about the same time, so that, in the course of one week after the fair alluded to, the disease had rapidly spread, but still was confined to the cattle on the different farms to which it first was carried.

7. Notwithstanding the utmost precaution was taken by the farmers to prevent this disease from spreading, by prohibiting all persons that had had any communication with infected places from visiting their farm-yards, before the latter part of the month (December) other places became diseased; and in every instance that I know of it never ceased to spread until nearly the whole of the cattle, sheep, and pigs in the place were infected.

There were three very clear cases, for the truth of which I can vouch, in which the disease was carried to the adjoining farms by their owners visiting their neighbour's infected cattle, and then going immediately home, and examining their own stock to see if they were still free from the calamity. In one instance of this kind the distance of three miles existed between the farms.

8. The foregoing statement proves the disease to be highly contagious, and at the same time I consider it to be likewise infectious. It is one of those contagious diseases which is communicable both by contact and without it, like small-pox, the matter of which, when brought into direct contact with the body, will produce small-pox; or when suspended in the air, or coming in contact with the body, is capable of being thus produced.

My reason for supposing it to be infectious, is in consequence of the great care that was taken to prevent the disease spreading; yet, in spite of every precaution, whenever it entered a farm-yard, whether by positive contact or through the medium of the air, it rapidly spread, until every ox, sheep, and pig was infected.

In no instance did I observe the horse attacked, and yet it was not altogether confined to quadrupeds, since I had one plain and palpable instance of this disease being communicated to the human subject. I heard of two others of a similar kind; but the case I allude to is sufficient for our purpose. It was that of a young farmer who exhibited every symptom which characterises the disease. There were the vesicles on the alæ of the nose, at the point, and on the sides; at the point and dorsum of the tongue, and on the gum of the upper and lower jaw. There was the constant flow of saliva, the inability to eat or drink any thing, either hard or very hot, or very cold.

This patient (for I attended him as well as his cattle) is an intimate and particular friend, and I had many opportunities of witnessing the progress of the complaint. He informed me "that he was first taken ill" with what he called a cold shivering fit,



about the hour of bedtime; and, believing that he had taken a cold, as he termed it, he drank a posset of treacle and milk. For some hours after, although warmly covered up, the cold fit continued. By the morning this had left him, and was succeeded by the hot fit. There was a great degree of constitutional disturbance; he had a difficulty of deglutition; his bowels were costive; his nose constantly itching; his tongue and palate dry; and the pulse ranging between 70 and 100, accompanied by great prostration of strength. During the night which succeeded, he could get no sleep; the itching of the nose was increased, and sometimes he had sharp and violent pains in the head and face. The next morning there was a discharge of an offensive matter from his nostrils; and for the first time he observed the vesicles on his gums and tongue. This was the period when I first saw him: he took some salts and senna, which freely purged him. On the next day the discharge had assumed a semi-purulent appearance. He afterwards took some mild aperient medicine, and in about a week or ten days was nearly recovered.

I have every reason to believe that the disease was communicated to him from having injured one of his fingers in giving a drench to a cow. The wound had a very unhealthy appearance for some time previous to his being attacked, as I have described.

9. I have observed this disease appear first in the feet in many instances, before it was visible either in the mouth or the tongue, &c.; but in the greatest number it was first observed by the increased secretion of saliva, the vesicles on the tongue and buccal membrane of the mouth, and the difficulty of mastication, &c. There will be no occasion to describe the symptoms, it having been done by so many already.

10. Ditto.

11. In many instances the animals were bled by their owners previous to my seeing them. I am not aware that this either accelerates or retards the recovery. My usual plan was to administer doses of Glauber salts and sulphur, in the proportion of *four* parts of the former to *one* of the latter, so as to produce purging, the dose being regulated according to the age and strength of the animal. The vesicles were dressed daily with a strong solution of the sulphate of copper. Proper attention was paid to their comforts, clean dry straw given them every day, and they were allowed as much gruel as they would drink. In some few cases, where there was great debility, and the animal did not quickly recover, I found great benefit in the use of the spt. ether. nit., in doses of from half an ounce to two ounces, given daily with gruel.

12. The disease was generally at its height about the third day

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after it was observed, and it usually terminated in about five or six days afterwards.

13. I had about 100 cases under my immediate care, but a considerably greater number were treated in the manner I have described in consequence of a "paper" of mine which was printed in the leading newspapers of the county, describing the symptoms and the method to be adopted in order to produce a recovery. I did not lose a single patient myself, but I heard of several cows which were pregnant dying from the disease.

I confess that I was one of those who wrote for the public on the Epidemic, but I believe, that, instead of losing any practice by doing so, I increased it. Long before this disease was observed in Cornwall, Professor Sewell's paper on the "Prevailing Epidemic" had been widely circulated by the different members of the English Agricultural Society, and by the different agricultural weekly and monthly publications; so that, by publishing a "report" of my own, I, in some measure, attracted the attention of all those whose cattle were diseased, and became employed in consequence by many who would otherwise have sent for the village blacksmith, or have *doctored* their animals themselves.

14. I cannot tell; I should think a great many hundred. The disease has become for several weeks much milder; and many a farmer has cured his cattle and sheep by administering doses of salt water from the briny ocean.

15. Diminished in quantity—but there were very few persons found hardy enough to give the milk even to their pigs, much less to consume it themselves, although I told them to the contrary.

16. The disease was not influenced either by age, strength, or sex: the fat ones suffered the most in their feet, and pregnant cows also suffered severely.

17. None whatever.

18. Generally speaking, the animals quickly recovered their strength and condition.

19. I have never met with a case in which the disease appeared a second time in the same individual.

20. I would add, that the disease has again nearly left the county.

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# A REPLY TO MR. GEO. FISHER ON THE ABUSES AT THE VETERINARY COLLEGE.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

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I will be hang'd, if some eternal villain,  
Some busy and insinuating rogue,  
Some cogging, cozening slave, to get some office,  
Has not devis'd this slander!

SHAKESPEARE.

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IT does not surprise me in the least that I should have a reply from Mr. George Fisher: indeed, he is just the person of the whole class likely to come forward to bolster up corruption, and to do the "dirty work."

It may appear to some harsh and indecorous on my part to treat the Professor and Mr. Barth in the way I have done; but I have a right to my opinion on the subject, and if I am wrong it is an error of the head, and not of the heart. It, at least, is not done either "cowardly," or "maliciously," as Mr. F. would wish it to be believed; nor yet hastily. No; malice never found a footing in my breast: but I must say that I am a determined enemy to tyranny and humbug in every shape and place; and when I see affairs at the College remain in a corrupt state for such a length of time, and no attempt made to redress them, or to the least disposition shewn to correct them, it becomes every one, not mildly and privately, but boldly and openly to speak out; and I, for one, will, and I hope always shall, speak my mind on the subject, however others may lull their consciences to rest, and tamely submit. The soothing system has been tried long enough, and even the Professor's setoning and an occasional cleansing out with his sulphate of copper, but all without avail; and it becomes now absolutely necessary to apply the cautery—the deep lesion cautery *à la Turner*, to produce the desired effect; for sure I am of this, that, however the Professor may "apply the unction to his soul" and trifle with the Agricultural Society and the public, the time is drawing near when an *efficient* lecturer must and will be appointed either there or elsewhere. I must nevertheless say, that sorry should I be to have the College divided: I would rather that it should become the pride of our country and a pattern to every continental school.

If there are those who feel offended at me, they have but to con-



sider the situation in which I have been placed, and they will not be harsh in their censure. Having been in practice sixteen years in this town, I felt a desire to obtain a diploma; not that it was required by my employers, for there was scarcely an individual who had ever expressed the slightest dissatisfaction, but I naturally wished to stand as respectably as others in the profession to which I belonged, and be what I had professed—not a “cowleech,” thou scamp! I therefore left for awhile a good practice, as well attended to as I could manage to leave it, and a wife and seven children, and entered the College in the session of 1839. I was there nearly two months in that session, during the greater part of which Professor Coleman was ill, and could not lecture, and from Mr. Sewell I heard only *two lectures*.

I have stated that, in the next session, Professor Sewell only gave ten lectures in ten weeks during a part of the course; at other times he was often absent, and the subject of cattle pathology was shamefully slurred over. Will Mr. Sewell say, that there were more than three *bonâ fide* lectures on the diseases of cattle during the whole of that session?

Will any one, also, deny that there was, during most of the time, an inefficient demonstrator?

Now, I would ask any man who was so situated, whether he could be satisfied and pass all this over, knowing, at the same time, that so many others were displeased and disgusted? Besides, it must be taken into consideration that mine was not one of those “young heads” that

“Make mistakes, for manhood to reform.”

I knew the value of time, and wished to employ it well; but I found myself miserably disappointed, both in the dissecting and the lecture-room.

In justice to myself I must now give your readers a little information about Mr. George Fisher, who, in the last number of your Journal, has thought proper to load me with a great deal of abuse. They will then be enabled to judge who is the best qualified to give an opinion on the subjects mooted in my last letter.

Mr. Fisher is the son of a horse-dealer in Bristol—not the worse for that—but, up to the time of his entrance at the College last session, he never had the least instruction from any one except stable-men on the diseases of the horse, much less on those of cattle. When at the College, he was one of those fine

“Civetted fellows, smelt ere they are seen,”

and who wished to cut the gentleman.

As to *his* duties in the dissecting-room (and here he is so liberal as to give me great credit for attention), every one knows how they were performed, and I believe there was not a student so

“Well prepared by ignorance and sloth”

as he was. I think that I can justly state, that he had only a share in one subject during the whole of the last session, and which he did not work at more than a day or two; and if I say he was dissecting at any thing more than six days in six months, it was really beyond the mark. Here it will be observed, that there was no danger of my “laying hands” on *his* subjects.

When weekly examinations took place, he was never half the time there; but this is easily accounted for—he was ashamed to shew ignorance.

It was he who, with a few others, in the course of the last session, asked leave of the Professor to hold a meeting in the theatre for the purpose of getting up a petition to the Medical Examiners to continue their services in preference to having veterinary surgeons; but, after drawing up the petition, he did not dare to present it.

You, Mr. Editor, perhaps recollect my shewing you an insulting anonymous letter that was written to me in consequence of the author being highly displeased at your appending the term “V.S.” to one of my communications last year. The author of this epistle, I have every reason to believe, was the said George Fisher. It was meanly dropped, unsealed, near the dissecting-room.

Mr. Fisher has reminded me, that when Professor Sewell announced that the governors were perfectly satisfied with the present lecturer, and that they would not appoint another on “cattle practice,” this was received by the pupils with considerable applause. That there was some little applause I acknowledge, proceeding from a certain portion of the class; but there was nothing of the honest cheering which shewed that the heart was in it.

He, Mr. F., then goes to “cattle practice,” and vauntingly and *ignorantly* eulogizes the Professor; and says “that he took immense pains to obtain animals labouring under the prevailing epidemic; and while they were under his care, DAILY noticed to the students the symptoms, progress, and treatment of the disease; and made *many post-mortem examinations*, and gave several lectures entirely on the subject, and visited large dairies in and around the metropolis.” He then mentions the ever-memorable circular of the Agricultural Society, and calls these things “facts.” Yes, I well recollect all about it; and we will just see whether I have indeed concocted a “tissue of falsehood,” and am

“Quick with the tale, and ready with the lie.”

All the cows brought to the College last session, I think, were four,—two with the epidemic, one with a fungoid tumour on the eye, and one for something else. With the two first you may well imagine we had lots of experiments, and, as a matter of course, in a short time, as “many post-mortem examinations.” As to the operation of extracting of the eyeball, I shall never forget it. The Professor was fully half an hour in taking it out, she being only held in a great measure by the horn and nose for a long time, and in a standing posture, and, of course, was backing all over the yard. On the next day she was taken away, never more to be seen or heard of by us. The other was brought over night, and taken away on the next morning; and it was aptly remarked “that she was too good for college doctrine.”

As to the circular, I look upon it as one of the most thoughtless and imprudent acts of his life, and which, in my opinion, has drawn down more ire from veterinary surgeons than any thing he ever did, unless his tenacity in clinging to the title and emoluments of Lecturer on Cattle Pathology. As to the lectures—few, few indeed—that he delivered on the epidemic, he acknowledged himself that he gained his information from Mr. Staveley, veterinary surgeon, now conducting his establishment at Islington, in barefaced defiance of the law which prohibits all out-door practice.

He then goes on to state, that, had Mr. Cartwright possessed common candour, he would have pointed out these “abuses while at the College, or have complained to the Professor in a gentlemanly manner, and then I am sure redress would have been afforded him.”

This was written somewhat hastily, and without any consideration of the inevitable consequence to be drawn from it. It completely exculpated me from having made any false accusations, for it clearly acknowledged that abuses did exist, and redress might have been afforded had I personally applied to the Professor.

In another place Mr. F. observes, “Mr. Cartwright then proceeds to state that the demonstrations sometimes occupied only ten minutes” (ay, and he might have said that they were occasionally given only every third or fourth day); he then adds that “he,” Mr. F., “certainly attended demonstrations regularly last session, and never found such to be the case; thirty or thirty-five minutes being the average time occupied by Mr. Barth; and on the days he did not officiate, the Assistant Professor occupied an hour in the dissecting-room: this Mr. Cartwright either negligently or wilfully forgets to mention.” Now I peremptorily ask Mr. Fisher, and I appeal to the students also, how he could for shame make such “fallacious observations.” He knows quite well that it was only during the former part of the session that Mr. Spooner voluntarily demon-



strated, and when Mr. Barth *ought* to have done so; and that during the other part of the session, and when Mr. Spooner was too much occupied by other duties to be able to continue his demonstrations any longer, he, Mr. Barth, was left entirely alone; and the character I have given of Mr. Barth's demonstrations is perfectly true.

Oh, shame, where is *thy* blush?

As to the public notice respecting operations not being necessary, on account of Mr. Spooner informing the students on his round, I acknowledge it was his practice, as I have stated in my last letter; yet I can hardly think that this was the proper time, for it is well known that many might not and did not hear of it, being occasionally engaged in the dissecting-room, and not accompanying him in his round. Nor indeed was it necessary to do this every day, as there is often nothing worth going round for, especially to those that had seen much practice. I, at the same time, unequivocally and respectfully acknowledge, that to the junior pupils many valuable clinical remarks were daily made by him. The proper time for the announcement, I think, would have been immediately after a lecture, or it should have been posted in the theatre or dissecting-room.

Thus, Mr. Editor, have I gone through the subject, and I see no reason to alter one iota of any thing I said in my last letter: and now, Mr. Fisher, I leave you to your open and disgusting courtship of Mr. Sewell on every opportunity. Your occasional invitations to his board, whence many better men are *excluded*—your visits with him to Flight's dairy—your neglect of every thing that is worthy of pursuit—your eager devotion to every thing that is mean and wrong;—"thou wretched, rash, intruding fool, farewell!"

Since the above was written, I have received several letters (with the author's signatures attached) from veterinary students, from which I shall make the following extracts in confirmation of my statements:—

"As it regards your paper in THE VETERINARIAN, I do not entertain a single doubt that you did it with a heartfelt desire that it should be of service to the present and future students; and I can assure you, that it is by nineteen out of every twenty of the students whisperingly said, there is not one word in it that is not pure truth. That is the sentiment of the great majority of the students; nor have I met one that flatly denies its correctness.

"Mr. Fisher I do not associate with, nor has he been a favourite of mine since the first time I met with him. We were astonished to find that he had taken up the subject, as we considered he was the last person that should have done so.

“ Mr. Fisher attends the medical schools, or somewhere else, more than he does this College. He is at times a fortnight away at once ; and I may safely say that, upon an average, he does not attend more than one lecture out of ten. As it regards his attendance upon Mr. Barth’s demonstrations, which are from ten to eleven (or ought to be), I can safely say I have not seen him there more than once or twice ; nor do I think he attended half a dozen times during the last session. As to dissections, if he stands to that which he asserted that he would do, he will never dissect again ; nor do I think he will ever forget the lesson which the Assistant Professor read to him at a late evening examination.

“ We have not had one cow this session, but Mr. Sewell is making an infirmary at Islington upon the premises of Mr. Flight’s dairy, where Mr. Staveley resides. As it respects the state of College affairs, I would say they are much as they were when you were there ; but Mr. Barth, it is true, has improved *a little*, and thus given us hope of further amendment. The students are too often, on Mr. Sewell’s mornings, waiting and waiting and waiting, as they used to do, and losing their time ; and too frequently, after all, going away without any lecture, or the slightest apology for the omission of it.

“ As to the infamous remark respecting your making free with other persons’ subjects, there are plenty here who will vindicate you to his face, if necessary, and who have had a far better opportunity of knowing the real state of the case than he has.”

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[All *personal* controversy between Mr. Cartwright and Mr. Fisher must here cease ; but the subject of “ the present state of the College, and the prospects of the profession,” is open to every fair, and candid writer.—Y.]

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## THE VETERINARIAN, MARCH 1, 1841.

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Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

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MANY of our readers are aware that “ the Committee of Veterinary Surgeons appointed for the purpose of promoting the interests of the Profession” has been diligently at work. A circular has been

sent to every practitioner who signed the first memorial, stating the important objects which they are now endeavouring to accomplish, namely, the obtainment of a charter extending to the graduates of the Veterinary Colleges of London and Edinburgh—by means of which they may become a recognized profession, and obtain protection from the injuries they receive from unauthorised and uneducated pretenders, and also from the discharge of certain parochial and other services.

Into the details of these measures it would be improper now to enter. It is sufficient to repeat, that a circular has been sent to every memorialist, and also, we believe, to every veterinary surgeon whose address is known to the Committee: should any have been forgotten, a copy of the intended proceedings will be forwarded to them, on application to the Chairman of the Committee, Mr. Thomas Turner, V.S., Croydon; the Secretary, Mr. T. W. Mayer, V.S., Newcastle-under-Line; or Mr. Harry Daws, V.S. Rathbone-place, London.

We extract the following passages from the circular.

“A donation of £20 having been placed at the disposal of the Committee, towards defraying the necessary expences,

“It was resolved,

“That this Meeting express their sense of the liberality thus exhibited, but at the same time deem it more expedient to exercise a general call upon those gentlemen who signed the memorial, as it is supposed that a sum not exceeding Two Guineas from each Member will be sufficient to carry out the object contemplated.”

“In compliance, therefore, with the wishes of the Committee”—writes the Secretary—“I now communicate with you, and earnestly entreat permission to attach your name to the petition in question. Any remarks you may be kind enough to offer, and any donation you may be pleased to give, will be most thankfully received by myself or any other Member of the Committee.

“An immediate answer will much oblige

“Your very obedient servant,

“THOMAS WALTON MAYER, V.S., *Secretary.*

“Newcastle-under-Line, Feb. 1841.”



The worthy Secretary had scarcely advanced thus far in his important undertaking, ere he experienced the most distressing bereavement that can happen to any of us,—the loss of the partner of his life. He has the commiseration of every one who knows his worth, and that is of every one who knows any thing about him; and even now, amidst his own domestic sorrows, he is engaged in the noble work he has undertaken.

The Committee is rightly taking the first step to place the veterinary art in the situation which it ought to occupy. It is high time that veterinary surgeons should begin to assume their true station in society. Their claims are fairly stated—their demands moderate, but just; and we trust that there is not a member of the profession who will hesitate to respond to the call.

No time is to be lost; and we hope that, in our next number, we shall be enabled to announce the presentation and good acceptance of the Petition and Address. In a letter just received from the Secretary, he states that communications and contributions are rapidly pouring in, and that he has reason to hope that the profession, as a body, will cordially unite in the accomplishment of this noble object.

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Another subject, interesting and important, is brought forward by our zealous and indefatigable friend, Mr. Morton. He shall speak for himself.

“There is that scattereth, and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty.”

“In the year 1839, I ventured to propose to the veterinary profession, through the medium of *THE VETERINARIAN*, page 530, vol. xii, the formation of a Benevolent Society, the object of which was, the relief of those members who might be in distressed circumstances, from mental or bodily infirmity, or who, from other causes, might be considered as requiring and deserving assistance, and which, in the event of their demise, after they have been subscribers for a certain number of years, may, under the like painful circumstances, be allowed to their widows or families.

“Such an Institution needs no laboured commendation. The less affluent will deem it but prudent to appropriate a small sum from

their annual incomes to secure to themselves the necessary comforts when age or infirmities may have overtaken them; for "he who depicts unto himself unclouded happiness on earth, or deems that he can subdue the agitations and sudden changes of this life, might as wisely look for substance in a shadow, or seek to bridle the waves of the ever-rolling waters;" while those who, through the kind dispensations of an all-wise Providence, are raised above these contingencies, whose pathway through life has been more bright, and on whom the rod of affliction has not been allowed to rest, will not hesitate to contribute towards the alleviation of those casualties which sometimes befall their less fortunate brethren in the profession, nor leave them alone to contend with the storm.

"The club of United Veterinary Surgeons, at their meeting on the 12th inst., did me the honour unanimously to approve of my suggestion, and with a view to ascertain what might be the feelings of the veterinary profession as a body, respecting it, chose the following Provisional Committee :—

Mr. Assistant Professor SPOONER

Mr. W. J. T. MORTON

Mr. W. YOUATT

Mr. H. DAWS

Mr. J. B. SIMONDS.

"This Committee has met, and given to the subject the consideration which it deserves. Ere, however, the present Members of the Committee venture to state or to adopt any definite plan of proceeding, they wish to ascertain the feeling and opinion of their brethren; and they would be thankful to receive from their brethren everywhere assurances of support, and hints as to the foundation and moulding of an institution connected with the best feelings of our nature, and that will ultimately become one of the noblest ornaments of the profession. Promptness is respectfully urged, as a meeting of those who are favourable to this Benevolent Society will be summoned as soon as a sufficient number of names has been obtained."

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The medical profession has lately been deprived of one of its brightest ornaments. On the 12th of last month died Sir Astley Cooper, than whom there were few men possessed of stronger natural

talent, or more extensive information, or in whose bosom beat a warmer or kinder heart.

He was the fourth and youngest son of the Reverend Samuel Cooper, D.D., Rector of Yelverton and Morley, in Norfolk, and was born on the 23d of August, 1768. He was distinguished at an early age by unusual activity of body and mind, a fearlessness of difficulty and danger, and an easiness of approach and warmth of feeling which endeared him to all around.

It is said that his attention was first directed to the medical profession by the adroitness with which he performed a serious operation on a playmate. In one of their boyish pranks, the femoral artery of his companion was wounded. The blood gushed out in a fearfully rapid stream, and in a very short time life would have fled. Young Cooper, however, was cool and collected: he applied his handkerchief around the injured limb, and so skilfully, that the bleeding was immediately arrested.

His profession in after-life was from this moment decided. He was apprenticed to a surgeon and apothecary in the neighbourhood; but in a country place like this there was not room and scope enough for a mind like his, and he was sent to London, to his uncle, William Cooper, a very respectable practitioner. Even here his powers were "cabinned, cribbed, confined," and he was transferred to the domicile of Henry Cline, one of the surgeons of St. Thomas's Hospital, and deservedly possessing the highest reputation.

The abilities, and the future bearing and character of young Cooper, were soon and plainly developed. He objected not to mingle in the amusements of his companions—he was the life of every party, and the ring-leader in many a harmless freak; but his devotion to his studies, and his preparation for the duties and the honours of future life, were never for a moment neglected. At the break of dawn he was always at his post, pursuing his anatomical researches, or watching some dubious interesting case, or prepared to assist in any operation or examination which science or humanity might require.

In process of time he became demonstrator of anatomy under Mr. Cline, and greater opportunity was afforded for the development of his peculiar talent. He was never absent from his post. He was the companion and the kind and unwearied instructor of



every well-disposed and diligent student. At the imminent hazard and the sacrifice of his health he pursued his course, and often was compelled to leave the dissecting table for a while from a feeling of sickness which was soon followed by the vomiting of a considerable quantity of blood. He attributed this to his long stooping over his subject, when he was engaged in demonstrating or dissection. This was a dangerous symptom, but it terrified not him, or caused him to relax from the labours of his task.

His instructions at that period were, like his works in after-life, remarkable for their clearness and simplicity, and the practical spirit which uniformly pervaded them. If there was a fault in his manner of thinking and teaching, it was that his information and his tuition were founded a little too much on his own observation and research. At different periods of his life he had the gratification to effect many useful discoveries, not the least important among which were those of the fascia transversalis, and the internal abdominal ring; but he did not always sufficiently value the labours and discoveries of his contemporaries:—not that there was ever an assumption of superior knowledge or skill, or the slightest attempt to deprive an associate of the least portion of the praise which was his due, but, relying so much and so justly on the closeness and the fidelity of his own examinations, he was not fully aware of the labours and researches of others.

Having thus established his reputation at St. Thomas's, he visited the French medical school, and became the intimate friend of Dupuytren. He there received the cross of the legion of honour, and was elected an honorary member of the National Institute of France. On his return to England he commenced the practice of his profession, first in Jefferey's-square, St. Mary Axe, and afterwards in New Broad-street; and, with the consent of the surgeons of Guy's and St. Thomas's he commenced a course of lectures on the principles and practice of surgery—the first regular course on these subjects that was delivered in London, for, anterior to this time, instructions on surgery were only given as a collateral branch of the anatomical course. This was the real foundation of his fame and his fortune. At first his class consisted but of 50 pupils, but it speedily increased to more than 400.

The style in which his lectures were delivered was exceedingly

pleasing. There was no affectation of superiority—no wish to force his own peculiar views on his hearers. There was little or no studied elegance of language, but there was the strong deep feeling of the importance of his subject, and the evidence of long and severe study to make himself master of every important point connected with it. His language was fluent and clear, and his meaning was never doubtful. Then there was the peculiar character of the man—his uniform affability, and kindness of heart—his happy tact of comprehending the wishes and the fears of the person with whom he was conversing;—these things diffused a charm about his society that was not soon forgotten.

It was, however, as an operative surgeon that he stood on the highest ground. He was a profound anatomist. He had an intimate acquaintance with the minute structure of every part—yet he prided himself not on this. He was not seduced to the performance of any singular, or, in other hands, hazardous operation. His anatomical and physiological knowledge was employed in ascertaining when an operation was necessary, and when it could be safely dispensed with; and none of his patients ever forgot the benevolent satisfaction that beamed in his countenance when he could safely say that there was no necessity to mutilate or to punish.

When, however, an operation was requisite, who can forget his kind and soothing manner to his patient—the boldness, the skill, the rapidity, almost without parallel, with which he proceeded;—yet no hurry—no confusion—the most trifling minutiae attended to, and the dressings generally applied by his own hand?

It will not be surprising that fame and fortune attended the course of such a man; not perhaps to the extent which has been asserted, but far beyond that which in his early days he could have anticipated, and enabling him to bequeath a princely fortune to his relatives. That, as years and honours multiplied upon him, he was somewhat more difficult of access—that, as his power of patronage accumulated he looked first of all, and yet not exclusively, to his numerous relatives—that occasionally, and yet the instances of this being few and far between, he somewhat rudely treated the rivals of early days—that the censorious and the hypercritical have the power of hinting at foibles like these, is that to be wondered

at, or is any rash sentence of condemnation to be passed? Let his foibles be what they will, his talent and his sterling excellence will be acknowledged by every well-feeling mind. We shall not readily meet with his like again.

But why, in a Veterinary Journal, is this lengthened detail given?

When Cooper resided with Mr. Cline, there was a young man who was appointed to attend upon the pupils, and to discharge many little services with regard to them. He was diligent and attentive; he imbibed their love of anatomical study; he was always at his post; and a kindly feeling grew between him and his master and the pupils. In process of time Mr. Cline presented him with indentures of apprenticeship, and otherwise assisted him in his medical pursuits; and between him and young Cooper a friendship commenced, which was not cooled or forgotten when each of them had reached the age of three-score years and ten. The name of this young man was EDWARD COLEMAN.

The Veterinary College was established about the time that Mr. Cooper started on his continental tour. Two years afterwards, St. Bel, the Professor, died; and, through the strong influence of Messrs. Cline and Cooper, and others, Mr. Coleman, who had now graduated as a surgeon, and was in practice in the metropolis, was appointed, at first, joint Professor with Mr. Moorcroft, and afterwards sole Professor, at the College. Messrs. Cline and Cooper were placed on the Medical Committee for the examination of the veterinary student, and connected with them were Drs. For-dyce, Relph, Babington, and Baillie, and Messrs. Home, Abernethy, and Wilson. This was a constellation of talent! and much was the veterinary profession, then in its infancy, indebted to these gentlemen for the honour which their patronage conferred on the establishment. There is no veterinary practitioner who does not deeply feel the obligation.

Here Sir Astley first acquired his love and his intimate knowledge of the horse, so far as the strange errors of his friend would permit. He was a constant attendant on the examinations; he was always found at the annual dinner, even when increasing years had induced him to absent himself from many parties purely medical. One of his biographers states, that he proposed to himself at one period to retire from his profession, and, for this purpose, bought a large farm in the neighbourhood of Hemel-Hempstead.



For a short time he was delighted with his new occupation; and more particularly when a horse or a cow or a sheep became ill, and needed his surgical or medical attention: and, even when he returned again to the practice of the profession, some of his happiest hours were spent in the company of his friend, and in presiding at the Examiners' board. Ill befall him who forgets or who undervalues the benefits connected with an arrangement like this in the infancy of our art!

Grateful, however, as is the youth to him who has watched over and guided his early life, yet, when he arrives at years of maturity, he begins to think, and he thinks rightly, that he has a right to manage his concerns, partially, at least, himself. He would not totally exclude his old adviser and counsellor, but he claims a voice in the disposal of that which concerns him, and almost him alone. So it was with the body of veterinary surgeons. They forgot not one obligation, but they began to urge certain claims which common sense, and honour, and justice, should not withhold.

Then came the time when—and we speak it with deep regret—the friendship between Sir Astley Cooper and Professor Coleman became injurious to the veterinary school. The Professor had many very strange opinions peculiar to himself, and which he was too apt to obtrude at the examination, although the main body of veterinary surgeons would decidedly reject them. Sir Astley had drunk deep of the spirit of his friend. He was afraid how far some of his favourite pursuits might be relinquished, or some of the opinions which he had professed for many a year disavowed; and, unconscious of the injustice they were committing at the termination of the first half century of the existence of the St. Pancras school, *the Examiners continued medical men, and, as such, necessarily ignorant of the nature and the treatment of many of the diseases of horses and cattle.* We here find some difficulty in forgiving even him, to whom, in many other respects, we willingly and truly acknowledge our obligation and our gratitude.

We will see what the Examiners will now do; and we hope that, fully convinced as every one of them must be of their inability to discharge at that board the duty which they owe to the institution and to the country, they will promptly and honourably resign in favour of those who alone are competent to the task.

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The following list of queries has been sent by the Royal Agricultural Society of England to each of its members: it is here inserted that it may spread more widely. Some of the members of the society have endeavoured to prevail on those who do not belong to them to send a reply to these queries. When the time is so near that it will be the fault of both parties if an honourable coalition does not take place between them, the Editor would urge his brethren and friends to respond to the call. He still supplicates a continuance of those communications, so important, which he has received, respecting the nature, source, effects and medical treatment, of this disease. If life is spared to him, they shall become the ground-work of an attempted history of the present and other epidemics; and therefore he wishes the communications to him to be of a professional character. The queries here appended are very important, but of a more general nature. We are all, however, in search of truth, and it matters not in what honourable way it may reach us.

#### ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

The President and Council having adopted the subjoined Queries, drawn up at their request by the Veterinary Committee, in concert with Professor Sewell, and resolved that a copy should be transmitted to each Member of the Society, for the purpose of obtaining an accurate statement of facts on the nature of the prevailing Epidemic among Cattle and other stock, the Secretary is directed to beg the favour of a reply to any of these Queries by the 1st of March; and to signify on the part of the Council, that gentlemen who will be kind enough to furnish the Society with such replies, *are particularly requested not to state any thing that has not come under their own actual observation.*

JAMES HUDSON, *Secretary.*

5, Cavendish Square, Feb. 3, 1841.

#### QUERIES FOR INFORMATION ON THE NATURE OF THE PREVAILING EPIDEMIC AMONG CATTLE AND OTHER STOCK.

1. Has the Epidemic appeared among your stock?
2. If not, has it prevailed in your neighbourhood, and how near your own farm?

3. If your stock has been affected by it, when did it first make its appearance, and in what kind of stock did it first appear, and to what other kind of stock has it extended ?

4. In what parish and county is your farm situated ?

5. Is its general character flat or hilly ?

6. If flat, is your farm screened ? and if among hills, is it on a flat or an elevation ? is the situation dry or damp, wooded or open ?

7. What is the nature of your surface-soil and substratum, and are there any rivers, ponds, or marshes, in your neighbourhood ?

8. What kind of weather was it when the Epidemic began, and what was the prevailing wind ?

9. Had the animals attacked with the disorder been in communication with any other animals which might have been diseased at the time ? If they had, what was the nature of that communication ?

10. Had the animals travelled along a public road, or been herded in any place where diseased animals might have been herded, or been attended by any person who might have been the means of communicating the disorder, either from having attended animals under disease or from any other cause ?

11. Were the animals, when taken, housed or out of doors ; in what condition were they ; how had they been fed, and what was their age ?

12. Did young or full-grown cattle appear to be most subject to the disease ?

13. In what way did the disorder first appear, and in what time after the supposed infection ?

14. Was the disease most frequent in the mouth or in the feet ; and when both mouth and feet were affected at the same time, in which did it begin first ; and in what kind of animals was the disorder in the feet most prevalent ; and in what kind that of the mouth ?

15. Are there any cases in your own stock, or in your immediate neighbourhood, in which an animal has been affected a second time ?

16. How many such cases have occurred within your own knowledge ?

17. In any case in which an animal has been affected a second



time, has the disorder appeared in a mitigated form, or with its usual severity ?

18. In any such case, state whether the first attack was peculiarly severe or not ?

19. In what manner have the animals been fed, and what has been their medical treatment ?

20. How many of each kind of animal died in proportion to the number affected ; and what were the appearances after death ?

21. In cows, has the quantity of milk diminished when the udder was not affected ? In those where the udder was affected with inflammation, has the milk returned, or ceased altogether ?

22. Have females, when pregnant, or when suckling their young, in any description of stock, appeared to be exempt from the disease, or to have had it in the usual form, or with more or less virulence ?

23. Has the disease appeared to have had any effect in producing abortion ?

24. In any description of stock have there been any instances of the produce of females affected with the disease shewing it at the time of birth ?

25. When newly-born animals have been affected with the disease, in how many days after birth has it appeared ?

26. Have there been any instances of any animal sucking infected cows having escaped the disease ?

27. Has it appeared in the feet of sucking animals ?

28. Have any of the cattle or other stock been attacked with cutaneous eruptions during or after the disease ?

29. In what state or condition has it left those that recovered from mild or virulent attacks ?

30. Have any of the horses on the farm or premises been attacked by any peculiar disease before, during, or since the cattle Epidemic ?

31. Have they been attacked by the ordinary Influenza or Distemper ?

32. At what time did the Epidemic seem to disappear from the farm ?

## R E V I E W.

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Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

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*Illustrations of the Breeds of the Domestic Animals of the British Islands, consisting of a Series of coloured lithographic Prints of THE HORSE, THE OX, THE SHEEP, THE GOAT, AND THE HOG. By DAVID LOW, Esq., F.R.S.E., &c. Parts 6 and 7.*

WE appear to have neglected this splendid and useful work; but an Editor has not always the command of his time or his pages, and ours have been fully occupied.

Mr. Low commences this number with an account of the different species of the equus or horse, concluding with the equus caballus, or common or domestic horse, “not more remarkable for the grace and nobleness of his form, for his strength, agility, and swiftness, for his boldness and spirit, than for the docility with which he resigns his vast powers to the service of mankind.” All these points he illustrates in a very interesting way.

He very properly observes, that “the pristine region of the horse cannot be known from any records of tradition or history. Either we may believe that the horse was called into existence in some one region which may be termed the cradle of the race, and whence he has spread as from a centre to other parts of the world; or we may believe that the species was called into existence in more than one place, and was thence diffused as from different centres.” He seems to incline to the latter opinion, for he says, that “the horse presents a different type in the three great divisions of the globe, corresponding with the three great families of mankind—the Ethiopian, the Caucasian, and the Eastern Asiatic.” The most ancient records we have of the horse are derived from Egypt; but the horses which the Israelites encountered in Syria had a different origin, and may be traced to the great mart of cattle which existed in Assyria and Media.

He first describes the African horses; and the reader will have much pleasure in traversing with him the wilds of Dongola, and the plains and deserts of Fez and Morocco, Tripoli and Lybia; but the interest increases when the true Arab horse is brought into the field. A plate is given of a genuine Arab horse, taken in battle, and brought to this country by Sir John McNeil. A short anecdote of him will be forgiven. “When his portrait was in the

course of being painted, he was languid from the cold of the weather. It was wished to rouse him for a little, and the idea occurred of trying the effect of some tones of simple music. The sounds no sooner struck his ear than his whole frame was agitated. His heart throbbed so violently that its beating could be seen, and so great was his excitement that it was necessary instantly to stop the music. Some chord of feeling it seems had been struck. Perchance he was reminded of his desert home, and of the friends from whom he had been so rudely severed."

The horses of the different countries from the eastern extremity of Asia to Great Britain pass in review, and fair justice is done to each.

As an illustration of the race-horse, a portrait is given of Vestris, the property of the late Mr. Hutchins. An account of the art of racing, or the rules and conditions of the course, is next presented. The biographical memoirs of the principal jockeys will be read with interest, but with interest of a different kind, the account of the manner in which the books of too many of the sportsmen are made up, and the infamous rogueries that are practised. We cannot, however, believe that they are quite so bad as Mr. Low describes them to be. It surely cannot be true that "a horse with the best blood of England in his veins, and the best jockey on his back, shall have no more chance to win when backed heavily to lose than a jackass." Nor can the opinion "of a rider and an owner of race-horses be true, that if Eclipse was again in the field, and backed to lose by certain influential bettors, he would have no more chance to win than if he had the use of only three of his legs." If things are come to this pass, the sooner every honourable man retires from the turf the better.

We heartily coincide in opinion with the author, when he deprecates the early use of the race-horse—"the stealing a miserable year or two from the youth of the growing horse, that he may sooner bring to his owner an unworthy gain." This scandal should be proscribed on the English turf.

The author next adverts to hunting, and gives a portrait of the old Irish hunter. We have not room to follow him here; but we unite with him in his dislike of the excessive and cruel speed of the modern chase, and the inhuman abomination of the steeple-chase.

A description of the Connamara horse closes this number. He inhabits the Connamara district of the county of Galway. Tradition gives to this horse a Spanish descent, as some of the ships of the Spanish Armada were wrecked on this coast in 1588. They are suffered to run wild amidst of the limestone rocks of this coast until



they are about four years old, when they are driven into the bogs and captured. They are hardy, active, and sure-footed.

In the seventh number Mr. Low returns to the sheep, and some splendid portraits of the old Norfolk, and the old Wiltshire breeds are given. To these follow the present Dorset, and, by way of contrast, the Merino. The work improves as it progresses, and is an ornament to the agricultural spirit of the present day.

Y.

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*Pathology, special or descriptive, of the principal Domestic Animals.* By L. V. DELWART, Professor at the Veterinary School at Brussels.

It used to be considered an essential part of the duty of a medical professor to compose for the use of his class, and of the medical public generally, a course, or more extended treatise on the division of instruction allotted to him, or on some particular portion of it. Such was the origin of many an inestimable work. Urged by a sense of duty, and flattered by the approbation of their class, or of the profession generally, Cooper and Travers, Lawrence and Elliotson, and Turner and Quain composed those noble works which will ever do honour to their memories.

In the schools of human and veterinary medicine abroad the same practice prevails. The professor of each school, as a proof to the public that he is capable of the task which he has undertaken, as well as urged by a feeling of attachment and gratitude towards his class, is anxious to give to his pupils a valuable guide in the pursuit of their studies, as well as a proof how much he is interested in their improvement and the honour of our profession. Thus a Bourgelat, a Gohier, a Chabert, a Huzard, contributed to the reputation of the French School in its earlier days; and, in later times, a Girard, a Delafond, a Vatel, a Renault, a Rigot, a Grogner, a Moiroud, a Dupuy, a Bernard, a Bouley, and a Gellé, have contributed to the improvement of the pupils, and the honour of the French veterinary profession.

The professors of the English school have yet been few in number; but they have felt the obligation under which they lay, and we have the short and valuable papers of Moorcroft, the elaborate work of Coleman on "The Foot," and his "Observations on the Effects and Treatment of Wounds of Joints;" &c. and, at a later period, the valuable works of Morton on Veterinary Pharmacy. Another lecturer has attempted to tread in the same path—but let him pass!

Our veterinary writers are those who are fitting to be professors, but on whom that honour had not been conferred; and we have a noble list of them. They, at least, have their reward in the satisfaction of their own minds, and the gratitude of their brethren. We can reckon in early days, a Blaine, a Clark, a Lawrence, and at a still later period, a Goodwin, and especially a Percivall—the pride of our profession. Others are becoming actuated by the same feeling; and in W. C. Spooner, and Stewart, and a host of worthies who have enriched the pages of *THE VETERINARIAN*, we have many who have an especial claim on our respect and gratitude. There is one who, ere long, must take his place in this noble list. His pupils and the profession demand it of him; and his love of the art, and his desire for its improvement, will not long permit him to be in the back-ground.

M. Delwart, on his appointment to the chair of pathology in the veterinary school at Brussels, hastened to give to his class and to the public a proof that he was not altogether incompetent to the task that had devolved upon him. It is an interesting and a difficult subject which he undertakes—the special and descriptive pathology of the principal domesticated animals. He is evidently well acquainted with all that has been said and written on the different subjects that come before him. If we were to find any fault, it would be, that there is not quite enough of quiet, plain, intelligible pathology; but the reader is amused, and his mind is interested—and deeply interested every reader of this work will be—with many very pleasing speculations which are not altogether founded upon or connected with practice. As a fair specimen of the work, we extract his observations on the disease of the articulations of colts, of which M. Lecoq treats at length in the latter portion of the *Proceedings of the Veterinary Association*.

“Colts while at the teat are subject to inflammation of the tissues concerned in the formation of the joints. It is first announced by an unwillingness to move, and the indication of slight pain when the articulations are pressed upon. The articulations that are generally attacked are the knees, the hocks, and the fetlocks. In proportion as the disease gains ground, the colt loses his spirits—he seldom goes to the udder, and he sucks with difficulty. The articulations become more tender and painful—the surrounding cellular tissue is infiltrated with a serous fluid, and an œdematous enlargement is formed. The disease assumes a more aggravated form—the little subject can scarcely raise himself from the ground, and he can stand but a little while. He is only able to suck by being held up to the udder. As soon as he is no longer able to rise, he refuses every kind of food—he is generally constipated, although there is sometimes diarrhœa, and death occurs in from six to ten days.

The principal lesions that are observed are found in the region of the joints. The tissues are infiltrated with a yellow serosity, the quantity of synovia is increased, and the articulations are more or less enlarged. Sometimes there are spots of inflammation on both the small and large intestines.

This malady, of which no one, notwithstanding its present appearance, has made mention, and which we have not been enabled to study in all its phases, leaves considerable doubt as to its etiology. So far as our observations have extended, we have traced its principal causes to the state of the mother. Whether her food has been of too exciting a nature, or she has been placed in moist or ill-ventilated situations.

The remedy consists in submitting the mare to an antiphlogistic treatment, and giving gruel, and straw, or but a small portion of hay. The little patient should be placed on fresh litter, and friction with camphorated spirit or turpentine or ammonia applied to his limbs. If the animal cannot get up without much difficulty or pain, it must be brought many times in the day to the mother, and held to the teat as long as it will suck. If these measures appear to have little effect, vesications must be applied to the diseased parts. Costiveness must be obviated by emollient injections. If it will not suck, or has not learned to suck, the milk should be drawn from the mother, and he should be plentifully supplied with it.

Y.

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## ON THE MARSH DISEASE IN THE HORSE.

*By M. G. CANU, Manche.*

[This disease, so graphically described by M. Canu, is no stranger to several of the low and marshy districts of this country, although it has not yet found an historian of its cause, or symptoms, or treatment. We trust that some of our numerous correspondents will give us their experience of it. They would be doing our profession service.—Y.]

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THIS malady—the name of which is erroneous, since it sometimes developes itself among animals that have not been bred in the marshes, but whose temperament is naturally lymphatic—has not yet, that I am aware of, been particularly described: nevertheless it has often disconcerted our veterinary surgeons in every part of our country, by the frequency of its appearance and the number of its victims.

The marshes in the neighbourhood of Isigny belong to those who live by the banks of the river, and who send thither a greater



or less number of beasts, according to the extent of their property. They can, if they please, sell that right. The breeders in my canton and the neighbouring ones often purchase that right, and stock it with colts, for which they cannot elsewhere find sufficient food. They derive considerable profit from this when the season is dry; but if it should be rainy, they will often have cause to repent, for most of the colts have the marsh disease. The climate, the fogs, and the herbs that a marsh land produces are the chief causes of the malady. I have also had occasion to treat the same disease in colts bred upon the hills, and in dry seasons. In them it has appeared to me to be caused by too great a quantity of drink, sometimes of a bad quality, and by sudden stoppage of the perspiration, too readily produced in the broiling days and the cold nights of autumn.

This malady, which bears considerable resemblance to anasarca, is most prevalent in the winter. It rarely attacks colts above three years old. In the department of La Manche, they are never stabled until they are fit for work, i. e. two or three years old: before this they are always at grass, and then their hair acquires in autumn a length of three or four inches. They are, consequently, too hot in the day, and this long hair, humid with sweat, remains cold on the skin during a great part of the night. They are seldom daily seen, for, disposed for mischief, they are not easily approached, and their long hair prevents the recognition of the early symptoms of the disease. In addition to this, the causes of the disease are not easily discovered.

The first symptoms, when they are recognised, are gradual loss of spirit and strength, a rough coat, great thirst, little appetite, and the pellets of dung a little soft: but that which is most characteristic, even before any swelling is perceivable, is the pain which the animal expresses when the croup is pressed upon at the commencement of the tail, or the chest towards the commencement of the withers. These parts, together with the belly, become the seat of greater or less œdema. The limbs likewise begin to swell, particularly the hind legs. The colts, which a little time before were chasing each other over the pasture, have lost all their spirit and courage, and are covered with perspiration after the slightest exertion. The mucous membranes are pale to a degree that would be scarcely credible. The appetite continues to diminish, but does not altogether leave them. It would seem that the produce of nutrition goes to the supply of that quantity of serosity which the meshes of the subcutaneous cellular tissue in different parts contain.

If the disease continues to progress, the croup becomes rounded and projecting—on the shoulders and withers soft tumours, very

sensible to the touch, œdematous, and rising to the extent of six or eight inches appear. Under the belly is a more extensive enlargement, but not so prominent or tender. The patients become more and more feeble and unwilling to move. They remain lying down all day long. The lips of the vulva in the female, and the scrotum in the male, and also round the anus and the raphe, are œdematous. The parts which touch the ground are easily excoriated, and the hair and the mane come off at the slightest touch. I have treated with success two fillies, each of which lost for awhile the whole of their coat. The hair may often be plucked off by handfuls, as from a skin that had been macerated in lime water. This is not, however, uniformly the case, for I have had fillies die of this disease without having lost a single hair.

Considerable abscesses often form under the skin, and soften and separate it to a considerable extent. They must, in general, be opened, or they will suppurate of themselves, and the integument will come off in large patches. These abscesses will be oftenest found in the neighbourhood of the articulations, or on the bony eminences which occasionally come in contact with the ground. I have seen exceedingly large ones beneath the skin of the abdomen. The pus which escapes from these cavities is thick, curdled, and of an offensive smell. This destruction of parts soon reduces the patient to a state of marasmus.

The urine is thick and oily, and the dung soft rather than hard, and with a most infectious odour. At last they are unable to rise from the ground, but still eat and drink in small quantities—the eyes are deeply buried in the head—the pulse is feeble and frequent—the heart still forcibly beats, and, at length, the animal dies, almost without a struggle.

Sometimes, however, there is a metastasis of disease to the chest, the abdomen, or, less frequently, the brain. The exterior engorgements are then more or less diminished, and much clear and yellow serosity is found in the chest or ventricles. The blood which these vessels contain is black, thick, and small in quantity. The tissues are pale and easily lacerated. The subcutaneous tissue, which has increased in thickness, is somewhat indurated in the portions which ordinarily contain the adipose matter. With these exceptions there are rarely any serious lesions to indicate the cause of death.

If it were possible to discover the cause of this disease, its ravages would doubtless be much diminished, and would cease altogether on having recourse to the proper treatment. The reciprocal action, the sympathies which exist between the intestinal canal and the exterior integuments, the functions of which are much diminished, would, perhaps, lead us to recognize a primitive intestinal

irritation. Then a restricted diet, and bleeding, by relieving and lessening the force of the sanguineous system, would, perhaps, in some colts produce a re-absorption of the serous effusion; but at the period when this disease is ordinarily discovered, I should think this mode of treatment very improper to adopt.

The first thing to be done is to withdraw the animal from the influence of this cold and dampness, and put it into a comfortable stable—to lead him into the open air, when the weather will permit—to give him very gentle exercise there—to give him regular but somewhat gentle hand-rubbing—to lessen the quantity of drink to which he has been accustomed, and to let that which is allowed be mixed with a little gruel, and a weak solution of some preparation of iron—to administer some special excitants, as the oxides of iron, crude antimony, powdered gentian, elecampane (*inula helenium*), powdered resin, or any or all of these used in drinks, with the farina of wheat or barley—an occasional gentle purgative, and to let the usual nourishment be substantial and easy of digestion.

When the œdematous enlargements are considerable, excitant frictions will, perhaps, be necessary for those on the shoulder and the croup. It is not the same, however, with those on the belly; and instead of minute punctures or incisions with a bistoury, I have often pierced the skin in twenty or thirty places with the point of a sharp heated iron. An abundant limpid serosity will generally run from all these openings. Eschars will follow, but at the end of a few days they will fall off, and give place to a thick suppuration. This will soon cease, and the engorgement will not be materially diminished.

Setons, of which we are often too prodigal, are seldom more efficacious. I once saw a colt with two setons in the thighs, two in the chest, and one under the belly. They discharged a great quantity of good pus, but this did not in the least degree prevent the commencement and rapid growth of the neighbouring parts, and the formation of new abscesses, and the animal, drained in every part, at length died a perfect skeleton. It is, however, rarely that I treat this disease without the application of at least one seton in the chest, especially when the progress of the disease seems to be arrested.

Such is the treatment which I have oftenest used; and I have many times been led to remark, that even the colts that may be said to have been cured do not possess confirmed health for many years. There is no disease with regard to which it is of so great importance that veterinary surgeons should communicate to each other the result of their experience.

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ON THE QUANTITIES OF CERTAIN METALS THAT CAN BE  
DETECTED IN THE BLOOD OF ANIMALS.

*By M. AUSSET, Principal Assistant in the Chemical School at  
Alfort.*

THE blood of some animals that were submitted to mercurial treatment has been analysed by M. Ausset, with the view of determining whether the presence of mercury could be detected in it. The blood was extracted six, seven, eight, and even ten hours after the exhibition of the mercury. The most delicate re-agents, such as the ioduret of potassium, the hydrosulphate of potash, polished plates of copper, and especially a plate of gold, surrounded by one of tin were used, but they yielded no trace of mercury, even though the effects of the poison on the frame was so violent as to cause the death of the animal. In point of fact, the blood had been extracted too late.

M. Ausset also analysed the blood of horses submitted to the action of large doses of tartarized antimony. Both in the blood and the tissue of the secretory organs, particularly the liver and the kidneys, the presence of the emetic tartar was detected more easily, and the mineral existed in a greater quantity, in proportion to the shortness of the time that intervened between the exhibition of the drug and the extraction of the blood. It did not, however, appear that the quantity found in combination with the blood bore any definite proportion to that which had been administered, since the spots which were obtained on the porcelain by the apparatus of Marsh were the same, whatever was the dose that had been given: in fine, it would seem that there was between the blood and the tissues of the organs a degree of saturation that could not be passed. That which confirms this supposition is, that there was found a far more considerable quantity than in the fluids excreted, such as the urine.

The acetate of lead, administered in a large dose, has been recognized in the blood of the horse. The method of detecting it was that employed by M. Orfila—its carbonization by the nitric acid, and the use of liquid re-agents on the filtrated residuum. The idea just before stated by M. Ausset, that the blood arrives almost immediately to a maximum of saturation, beyond which it seems impossible for any to be admitted into the system, however great may be the quantity employed, is confirmed by the result of certain experiments with the acetate of lead. The quantity of this salt found in the circulatory fluid was the same at the expiration of a given period, although the doses received into the digestive tube varied from 200 to 750 grains.

*Rec. de Med. Vét. Sep. 1840.*

THE  
VETERINARIAN.

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VOL. XIV, No. 160.]

APRIL 1841.

[New Series, No. 100.

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ON THE PREVAILING DISEASE IN CATTLE, SHEEP,  
AND SWINE ;

*Being a Letter by PROFESSOR DICK, of the Veterinary College,  
Edinburgh, addressed to his Pupils.*

Edinburgh Veterinary College,  
21st January, 1841.

IN consequence of numerous inquiries from many of my former pupils regarding the murrain, and the difficulty of devoting a sufficient portion of time to answer every individual at length, I have been induced to give the following statement as a general reply to the questions which have been put to me.

I am glad to be able to state that the murrain is a less formidable disease than has generally been represented ; at least, such has been the case with it so far as it has fallen under my notice.

It appears to be a slight influenza or catarrh, attended with blisters about the nostrils, upper lip, tongue, and gums, sometimes also upon the teats and about the heels, and especially at the interdigital space in front, above and between the hoofs. The blisters break in about twenty-four hours. In the mouth the cuticle peels off, but is reproduced in about three or four days ; on the other parts the serum contained in the blisters escapes, and a dry scab is soon formed, which, when the animal is properly treated, falls off and leaves the skin healed beneath, and the animal is quite well in about a week. There is little, if any, fever, the pulse commonly ranging from 50 to 60. The respiration is not affected, but the appetite is considerably impaired, more, however, apparently from the state of the mouth, than from any functional or structural derangement.

In some cases there is a tendency to constipation of the bowels, and in them the pulse becomes increased in frequency, rising to 80 or upwards. When the teats are blistered, great care is necessary in milking, so as not to draw them too much, and thus excite active inflammation, which may extend to the udder and produce serious disease. I have met with one case of this kind, in which the inflammation was caused by the dairy-maid introducing straws into the teats to draw off the milk. In almost every other case, the parts have soon got well by simply washing daily with the solution of alum, and anointing them with a little lard or palm oil. The hind-feet are most commonly affected, which seems to arise from their being more exposed to filth and moisture; and unless these causes are avoided, the parts are apt to become much inflamed, and deep and extensive sloughings (even to the extent of casting the hoof or sloughing of one or both the digits) will be almost certain to occur. These effects prove extremely troublesome and tedious, produce considerable fever, and may even prove fatal. Sloughing sores are, perhaps, sometimes produced by bathing or rather scalding the parts with too hot water during the first stages of the disease (and such causes must be avoided), or by the application of too powerful escharotics when there is much inflammation or soreness about the feet: when this occurs, poultices of bran should be applied, or a lotion of blue vitriol (sulphate of copper) half an ounce to a quart of water, or of white vitriol (sulphate of zinc) one ounce to a quart of water, and a little resinous ointment. If there is much active inflammation, a lotion consisting of one ounce of acetate or sugar of lead to a quart of water may be mixed with the poultice. When the disease first makes its appearance, I have found a dose of one pound of Epsom salts with four ounces of sulphur, given at once, and half the quantity of each the next morning, if the first has not operated, and repeated in twelve hours, with a drachm of croton cake, one of the best remedies which can be employed. If the pulse rises, two drachms of antimonial powder, with four of nitre, may be given night and morning until it is reduced. If the bowels again become constipated, another dose of salts and sulphur should be administered, as the most important object is to produce a healthy action of the bowels. In some cases, slight symptoms of red-water make their appearance, but these are soon removed by laxative medicine. If the pulse falls, from four to eight drachms of sulphate of iron, given in gruel as a tonic night and morning, are of service. The mouth may be gargled two or three times with a solution of alum (one ounce dissolved in a quart of water); and a lotion of sulphate of copper (half an ounce to a quart of



water) may be applied to the feet twice a-day. Bleeding is seldom if ever necessary, as the disease is rather inclined to a typhoid character, and the debility induced by bleeding increases the tendency of the disease to assume this character, and causes the blisters to ulcerate and slough. Moreover, from the weak state to which the animal is reduced in consequence of the tenderness of its tongue and gums preventing it from taking food for one, two, or three days, it is evident the bleeding is not admissible, unless active inflammation occurs.

On the contrary, great care is necessary in nursing the animal with gruel and soft food, which, if warm, should not be given above blood-heat. Raw turnips should be given in thin slices, and it may be necessary to put a slice a few times into the animal's mouth to induce it to eat, which, when it has begun to do, it will generally continue without further trouble. Care must be taken to keep the animals' standing clean by giving them plenty of clean dry straw, and removing the dung as often as possible: unless care is taken in this respect, the sloughing of the feet extends, and the animal, especially when tied to the stake, is very apt to bruise its knees and other parts of the body, which is often followed by extensive sloughing of these parts. In such circumstances, if due precaution is not used, and the animal is not allowed more freedom, there is some risk of these injuries proving fatal by the irritation which they produce. These results, however, are not to be referred to the disease itself, but are entirely the effects of neglect and mismanagement.

The same treatment is required for sheep and pigs, the dose of the medicine for them being about one-sixth part. It is impossible, in many places, to get a large flock of sheep into a sheltered situation, so as to keep their feet dry; but if they were folded on a dry place, and a quantity of dry straw given them daily, it would be of great service. Swine are seldom so numerous but they may be got under cover and made dry. Upwards of fifty were affected in one establishment here, and they were put into a dry place and treated as recommended above, and all recovered in about a week.

Prejudice has arisen here against the milk yielded by cows labouring under murrain, but as far as I have seen it is unfounded. I tasted some, and knew no change in its perceptible qualities; and although I drank off a large tumblerful, I experienced no unpleasant feelings from so doing. In the cases where there is fever and much increase in the frequency of the pulse, there must be more or less alteration of the secretions, both in quantity and quality. In those cases, however, where, from improper treatment in milking, abscesses form in the udder, of course, whether there

is fever or not, the diseased glands will produce a diseased secretion. In the generality of cases of this disease, however, I have already stated, there are scarcely any febrile symptoms present, and, consequently, there is little alteration in the state of the milk; and I am very sceptical regarding the fatal or even prejudicial effects which have been attributed by many to this secretion.

Two dogs were fed entirely for some days on the milk furnished by animals affected with the disease. They continued in perfect health, and seemed to get fat. Cows do not give so much milk while they are ill, but that seems to be owing to their not being able to take food. As to the beef, it appears quite sound, and, except the blistered parts about the mouth, there will be no other marked appearances observed. As none of the animals under my charge affected with the disease have died, I am not able to say any thing regarding the effects of the disease from *post-mortem* examinations.

I rather think that the disease will be found in general so mild, that few will have an opportunity of examining the animals after death, if properly treated; and, if not so treated, perhaps, what is observed may be either the effects of mismanagement, or arising from other disease previously lurking in the system.

*Note.*—A disease has also appeared among horses of a more dangerous character, commencing with catarrh, but generally affecting the heart, and attended with considerable fever, requiring commonly bleeding in the first place, blistering the throat, very mild laxatives, and sedatives, until the pulse is reduced; after which tonics, and sometimes wine or other cordials.

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## ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Messrs. J. and G. HAWTHORN, Kettering.*

WE received your circular containing queries respecting the epidemic among cattle; but, owing to press of business, we could not answer it immediately, and are compelled now to be brief for such a subject; but a deep sense of the duty which we owe to the profession and to THE VETERINARIAN induces us to contribute our mite. Perhaps it will be best to answer your questions in the order in which they stand.

1.—We are situated in the midland part of England. The

country round has a gentle undulating surface, intersected by small rivulets. The nearest point of the river Nen is eight miles distant. The neighbourhood is studded here and there with woods, and on the north-east with an extensive tract of woodland forest.

2.—The soil is, for the most part, light and dry, with a considerable mixture of black heavy land ; but, on the whole, well drained. It is more of an arable than grazing district. The previous feeding for some months had been in the straw-yard and the stall, and the usual quantity of cattle in the fields were foddered with hay when necessary.

3.—The epidemic first made its appearance in March 1839.

4.—The weather had been rather rainy. The month of March had its usual character and proportion of storms and easterly winds. February gave us some fine weather, and less wet on the whole than usual ; but all the other winter months, and the whole of 1839, were remarkable for the extraordinary quantity of rain which fell.

5 and 6.—The disease first appeared among some fresh-bought lots of north-country cows, but we cannot tell whether they had caught it on their journey. Afterwards the cattle which lay near to roads were most liable to the infection. The above cows had come from large fairs. The next two or three lots were either home-bred, or had been on the farm many months. There were some infected cattle about two miles from the first of these lots, up the same valley, and the wind was in the quarter to carry any miasma to those below them. At the same time, the owner of those to whom we are referring had twenty more bullocks in a straw-yard in the same direction, about a mile off, and they escaped.

7.—Not that we know of, as we understand the question ; but it frequently occurred afterwards, and there is reason to think, in many cases, such persons communicated the disease ; as we also believe that the shepherds who attended diseased cattle communicated it to their sheep. Very early, however, after the epidemic appeared, shepherds were forbidden to attend cattle, and persons who did attend them were kept from healthy cattle as much as possible.

8.—We cannot doubt about the disease being both infectious and contagious. Several calves from diseased cows have had the disease the first, or second, or third day after their birth. Some few have died, but most recovered. Generally speaking, no cattle escaped that lay together, and those that were in a neighbouring yard or close were almost invariably affected. At different times during the last year, when the disease had abated and almost disappeared, it was sure to break out again after any



of our periodical fairs in the country round. In fact, we expected it beforehand, especially if they were large fairs. In several cases, the disease first appeared after a cow had been sent to the bull, where the disease was or had recently been. That it is contagious is, we think, also proved by its being easily communicated by inoculation either in the dewlap, or merely by applying diseased saliva to the lips of a healthy animal.

In one case, a diseased cow went into a farm-yard for half an hour, and then was turned into the field. There were no other cows in the yard. In a day or two the pigs were all diseased. In one instance a farrier gave a cow a drench with a horn with which he had just been drenching diseased beasts: the cow and all the other cattle on the farm very soon had the disease.

9 and 10.—Staring of the coat, looking thin, saliva hanging about the mouth in bladders, or hanging from the lips nearly to the ground; smacking of the jaws together with a peculiar noise; stiffness, lameness, shaking first one foot and then the other, and also costiveness, were the most common symptoms. In a great majority of cases the mouth was first affected—now and then the feet. The pulse was quickened, sometimes full and hard, and sometimes depressed, or not altered in slight cases. Blisters were on the tongue and membrane lining the lips, followed by sloughing. There was ulceration and sloughing of the membrane connecting the claws, and ulceration and separation of the hoof at the coronet and heels, accompanied by a most offensive smell both from the mouth and feet: also, inability to graze or to eat loose food in bad cases; although we do not remember a case where there was not a disposition to eat. In some few cases, there was ulceration of the base of the horns similar to the coronet, and ulceration of the alæ of the nose, in some cases so violent, that the septum has been torn completely through by the man's fingers who held the beast.

11.—We prefer keeping them in the open air if possible. The weather, however cold or wet, does not injure them if they have a sound lair. Confinement and a close habitation are injurious. Purgatives were given at first; setons in the dewlap were used until they became too numerous, yet we think they were beneficial. If the bowels were not opened by the first medicine, it was repeated, and occasionally three or four times. The medicine used was sulph. mag. ℥viij, sulph. com. ℥iv, with treacle, combined frequently with sp. nit. æth. ℥j. In all cases, gruel when they could not eat. The worst cases have been those where purging was neglected. We have bled very little; only a few, when the membrane of the trachea was affected, producing cough, and when symptoms of inflammation of the lungs existed. In two or three

of these cases, blisters to the chest were applied with good effect. In one instance, two calving cows were attacked at the same time, and in the same degree, both in good condition. We bled the one with most flesh, and not the other, as an experiment. The one that was bled had the disease most severely, and was the longest time in recovering. In cases of cattle in good condition, venesection to a small amount, two or three quarts, seems neither to hasten nor retard the cure. We have seen many that have been bled, and have done well; but we have not found it necessary, as other means have perfectly succeeded without it; and we are decidedly of opinion that large or frequent bleeding is injurious. The fever attending the disease is of the eruptive kind, and nature relieves herself of the poison by these eruptions in the mouth, feet, &c. There were several cases accompanied and followed by diarrhœa, which were easily subdued with opiates.

12.—From three days to ten generally; but in extensive and deep ulcerations of the feet, longer. In some cases the lameness continues for weeks. We attended some milch cows last August, whose feet were very bad. They were in a low irrigated meadow, and we have always found that in such a situation the disease is more obstinate and difficult to overcome. The higher and dryer the ground the better for the animal. These cows had their feet ulcerated all round the coronet. We happened to see them to-day. We found they were still lame, and they will be so until they have thrown off every portion of the old separated hoof. We have always dressed the mouth with astringent lotion, and the feet with ung. petrol. and sap. mollis. for a few days, and then applied a weak solution of cup. sulph. to the feet, increasing the strength as required. The same was done to the horns.

13 and 14.—Nearly all the cattle (all in many or most parishes) in the neighbourhood have been affected. We cannot tell the number we have attended and prescribed for; we believe it would be considerably underrated at 1500. It is altogether a conjecture. We think we have not been without some patients above one or two weeks since March last. We do not imagine that one has died fairly and exclusively from the epidemic, and that had been well treated from the first. We have known a few die from starvation, caused by gross neglect.

We attended a cow that fell two days before of the disease. Her mouth and feet ulcerated. The feet had been *well dressed* and *well dried* with muriate of antimony. She calved the next day, and, when we saw her, was down, and had all the symptoms of puerperal fever and distemper. We have no doubt that the caustic applied to the feet did the mischief. She died. Some few have had abscesses formed in the knees, humeral muscles,



hocks, and among the flexor tendons, but for the most part, if not wholly, these have been neglected cases. There are more dying now—January—in this county than at any other time since the disease first appeared; but they are newly-bought beasts, that travelled day after day in the late frost, their feet cut and worn to the bone by the sharp and hard roads—their constitutions undermined by pain, want of food, and rest; and their muscles inflamed by extraordinary exertion to save their feet. Many of these are distressing cases. In several we have had to take out the toes of the coffin bones, and in others there were large effusions of thin brown foetid pus under the skin over the sacrum, pelvis, and thighs; and when these tumours are opened, large pieces of mortified muscles, the size of a man's hand, have been extracted. Of course these have been murdered by travelling when ill; and, if you will excuse the Irish bull, these cows must many of them die.

15.—The milk is generally diminished in quantity and quality, frequently ropy, and like curds and whey. Too often the secretion is of a dark brown colour, and foetid; and the udders of many cows will be permanently injured.

16.—We have not found the age of the animal, except in the very young calf, the sucking calf, influence the complaint. The disease is generally more favourable in an animal of good than of bad condition.

17.—We have seldom or never seen it have any connexion with other diseases, except as previously stated.

18.—For the most part, if the beast was well kept, it throve the better for having had the disease.

19.—We have not seen a case of the same animal having the disease twice. We have seen many instances of diseased animals turned with others that had recovered, and recovered animals turned with diseased ones, but we have not known the disease to return. We would not say no animal can have it twice.

A gentleman, upon whose intelligence and judgment we can rely, told us that he had a cow which had the disease twice. She perfectly recovered from the first attack, remained well for months, and then became ill a second time. He gave her medicine, and dressed her mouth himself both times, and the ulceration was as great on the second attack as the first. We have been frequently sent for to single cases, and to herds, which were said to be attacked a second time; but always found the owners mistaken. Indeed, for some months, every thing was distemper with some people. We have made some calls on purpose to ascertain the truth of such reports, but have found them to be



untrue. We have been told by a clerical gentleman that this disease has always been known in the East Indies, and that it is looked for regularly after the periodical rains. We should like to know the opinion of yourself and our professional brethren about the probability of its being naturalized with us. At any rate, we are afraid it will remain so long as to be an "auld acquaintance."

We are, with much esteem,

Yours, &c.

J. and G. HAWTHORN.

Our druggists are selling drinks for the "Cattle Distemper" at 4½d. and 5d. each. What a profit *we* shall have!

## ON THE PRESENT EPIDEMIC AMONG CATTLE, &c.

*By Mr. JOSEPH CARLISLE, V.S., Wigton, Cumberland.*

THE word Epidemic applies to any disease more or less general or universal among cattle, sheep and swine, or even the human being, and which depends on some common cause or peculiar state of the atmosphere.

If considered in a medical or physiological point of view, the most important effect produced by the atmosphere is that of changing the blood from a dark modena-red hue to a bright scarlet colour, and from a fluid that is altogether destructive to life, to one which is the very pabulum of it. This is accomplished by the function of respiration, which allows the atmosphere to exert its vivifying influence on the blood brought into contact with it through the medium of the bloodvessels—the principal organs concerned in the office being the lungs. The skin is also believed to perform a similiar function, but to a much less extent.

Epidemic diseases are, doubtless, generated by the existence of some peculiar poison or deleterious gas by which the atmosphere becomes contaminated, and which, coming into contact with the blood in the lungs, or through the medium of the common envelope or skin, this fluid is affected or empoisoned by it, and consequently the parts which it supplies become deranged in structure and function.

The peculiar state of the atmosphere under which the various epidemics and epizootics occur has never been satisfactorily explained. It is changed in the proportions of its component gases,

or empoisoned by miasmata which had escaped from the bowels of the earth, not cognizable by our senses, nor detectable by our ablest chemists. The change is known only by the effects produced on the animal body.

Epidemics assume different forms and characters, depending very much on the locality, the predisposition of the animals, and this unknown atmospheric poison. Locality is a great predisposing agent to epidemic diseases. It forms one of the greatest obstacles to remedial means; it proves the greatest annoyance to successful treatment, and may possibly have something to do with the origin of the disease. Locality often influences the character of disease, and is the cause of some singular train of symptoms, varying with the soil, pasture, and previous management of the cattle; but the present disease is little influenced by it. It assumes nearly the same character almost universally; it is highly infectious, and also contagious. The disease has been communicated to beasts previously sound by butchers, veterinary surgeons, and the usual attendants on cattle; and it has been propagated by cattle walking on roads where infected ones had previously gone. Its origin, however, is in the atmosphere, and its nature and properties far beyond our comprehension.

It may be conveyed from one animal to another by vaccination. I vaccinated nearly one hundred, and the disease seemed very much mitigated. I also vaccinated several horses and dogs with the virus or matter taken from the diseased cattle; but it had not the least effect. It appears, in its present form, to be confined to the cloven-footed animals; yet we have well authenticated facts of the attendants on these diseased cattle being similarly affected, from having a sore on some external part of the body, with which some of the matter had come in contact, and produced similar eruptions, or sore throat, and considerable constitutional derangement.

*The Symptoms* characteristic of the disease are not easily mistaken at the commencement. The animal appears dull—the hair stands erect—there is great disinclination to move—an immense flow of saliva from the mouth of a ropy consistence, and, on opening the mouth, large bladders or vesicles are observed on the dorsum of the tongue and membranes of the upper lip and gums: these blisters soon burst, leaving unhealthy sores or ulcers—the feet become affected with similar eruptions, and very frequently, in neglected cases, the claws slough off, which proves a source of irritation and pain—the animal becomes seriously emaciated during the reproduction of horn to protect the sensitive parts of the foot, and support its weight—the udder is occasionally affected, and the teats are covered with similar eruptions, rendering milking a painful operation—the pulse is seldom much accele-

rated, and the respiration not much above the general standard of health. Sometimes we observe a peculiar *mumping* with the mouth and tongue, and loud grinding of the teeth, bespeaking great pain. This is immediately followed by a discharge of foam or saliva from the mouth, which continues for some time; and then the animal will suddenly assume a more tranquil state, and appear as if nothing was the matter.

The above symptoms will continue from six to eight days, according to the treatment adopted; but in some cases the feet appear first affected. Two or three days previous to the attack the cattle will frequently be heard to cough or hoarse.

*Treatment.*—This must vary according to the symptoms and course of the disease, and which entirely puts an end to all nostrums, specifics, and never-failing recipes. In regard to medicine, we must bear in mind how requisite it is that what we exhibit should take speedy and due effect; it therefore must be exhibited in due and proper doses. Some practitioners have recommended bleeding, others strongly deprecate it; but this, like purgation, must depend on circumstances. In some cases, where the disease is ushered in by alarming inflammatory symptoms, and the animal is in a plethoric state, it may be advisable to bleed, but by no means to a great extent; for the character of the disease which supervenes is of a remarkable low typhoid nature, and it invariably assumes a more protracted form after bleeding has been pushed too far. I have, however, attended nearly 1000 cases, and never in one instance found venesection, in my opinion, necessary, except mere topical bleeding. The purgative should be sufficient to excite the bowels to moderate action, but not to produce dysentery.

In the generality of cases this typhoid fever will continue from six to eight days, according to the treatment of the animal, with little marked variation in its stages, except some paroxysms or periodical exacerbations, depending on the severe pain of the feet in neglected cases. Here we have marked symptoms of symptomatic fever, clearly demonstrating that our greatest attention should be paid to the feet, and on this will depend, in a great measure, our success.

More depends on the local treatment of this disease than on internal remedies. They are both useful, and should be employed in time; but bleeding is seldom necessary, and drastic purgatives are always dangerous. The best and safest treatment I have found is to keep the stomach and bowels in a somewhat lax state by the administration of sulphate of magnesia or soda, the doses seldom exceeding  $\text{℥ss}$ , combined with nitre and ginger, of each  $\text{ʒi}$ . This medicine must be repeated until the proper effect is



produced. Some little caution, however, is here requisite; for twelve cows in Westmoreland were, a little while ago, drenched with a solution of nitre, instead of Epsom or Glauber's salts, and every one of them perished.

On the third day from the attack it will be necessary to dress the feet with the following mixture; but previous to its application all the diseased parts and separated portions must be carefully removed:—Take tar  $\mathfrak{ss}$ , sulph. cupri  $\mathfrak{ziii}$ , finely powdered and sifted. Melt the tar, and gradually add the copper, continuing to stir the mixture until it is cold. This ointment should be spread upon some pledgets of fine tow, and applied to the feet: one dressing will, in ordinary cases, be effectual. In some instances I have known sinuses form in the laminated structure and under the ligaments. Setons judiciously placed will then form the best treatment. I have invariably applied the same mixture to the mouth by wrapping a piece of tow round the end of a stick, and spreading the ointment upon it, and introducing it into the mouth, when, by the motion of the tongue, the dressing will be diffused all over the mouth. It is of the greatest importance to allow the animals plenty of clean litter; and every other attention regarding cleanliness is indispensable.

In cases where the breath of the animal is very offensive, I have used a solution of carbonate of ammonia in cold water twice a-day. In protracted cases, and under emaciation and debility, it is necessary to supply the patient with good gruel or ale, with two drachms each of ginger and gentian twice a-day. Setons placed on one side of the dewlap are beneficial in milch cows: I think this prevents the udder from becoming much involved. When the udder has suffered much from the disease, some parts of the gland becomes scirrhus. The best application is strong mercurial ointment  $\mathfrak{zii}$ , iodine  $\mathfrak{ziii}$ , camphorated oil  $\mathfrak{ziii}$ : rub down the iodine with the camphor, and then add the oil. Apply it every day, well rubbing it in. I have also met with several cases where large abscesses formed on the hip, generally deep-seated, and containing a quantity of thin purulent matter: it is necessary to open them freely, and apply a saturated solution of nitrate of potass, and afterwards common digestive ointment. Under those circumstances a singular insidious lurking derangement of the mucous membranes of the intestines is often found. Tonics of the vegetable kind suspended in linseed tea are here the best medicine.

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## ON THE PRESENT EPIDEMIC AMONG CATTLE.

*By Mr. J. HAYES, V.S., Rochdale.*

ALTHOUGH not solicited personally by circular, yet feeling anxious to contribute what little information I do possess, I send you the following true statement to your questions in the last number of *THE VETERINARIAN*, respecting the late and present epidemic among cattle.

We have been visited by this strange and little known disease. Although it has not been fatal, except in a few instances, yet it has been the source of much trouble, annoyance, and expense to cattle keepers.

It first made its appearance in this district in the beginning of July last, at a farm two miles from this place. The whole stock, seventeen cows and a bull, were affected in the space of six days. The soil is light, dry, and sandy—the pasture bare, short, and poor—the cattle had been much fed on malt draff, &c., and the weather, previously very dry, had now changed to wet. There had been works lately erected for the manufacture of naphtha on one part of the land, the refuse of which was allowed to run down the ditches, through the pasture, and into the pond at which the whole of these cattle were watered, and which water was covered with a thick black scum, very foetid, that came down from the works in great quantities.

This was first thought to be the cause of the disease by the owner, and also by the cow-doctor of olden times; and the proprietors of the works were threatened with an action at law against them forthwith; but before proceedings were commenced, the owner's attorney called on me, to request I would ride over to see them, and examine the water, &c. and give him my opinion thereon. I did so, and found the circumstances as above stated. On examining the cattle, I immediately recognized this strange epidemic, the symptoms precisely agreeing with the description of them in *THE VETERINARIAN*. I gave my opinion accordingly, and thereby saved the owner from the expenses of a suit at law. In a few weeks it spread over all the adjacent parts.

2. The soil of this county is various, some light, dry, and gravelly, and some stiff, heavy, and wet, with a clayey subsoil. The disease appeared to pay little deference to the kinds or qualities of soil or herbage, except that it seemed to be more intense and general on high and exposed situations, both on the pasture and in the stall. Those that were highly fed were also more generally and more severely afflicted. Few districts escaped, yet there are

two townships, near here, where not a single case has appeared for a long time. The farmers in these parts determined not to buy any fresh stock until the disease had subsided, and so far they have been successful.

3. Its first appearance was as I have before stated ; but it raged from the beginning of September to December.

4. The state of the weather was the two extremes of dry and wet at intervals, but principally wet and foggy.

5. By the strictest inquiry, I cannot find one dairy in which I am not able to trace the seeds to either a fresh cow, pig, or sheep, or the contact of servants, or the master himself having been in contact with diseased animals. In one large dairy, the owner took every precaution to keep his stock free ; but it soon broke out amongst them, and twenty-four were affected in one or two days. He was quite astonished, and thought nothing could have carried the disease to his cattle ; but on my questioning the herdsman, he acknowledged he had several times visited and examined affected cattle in the neighbourhood.

6. As the public roads are very numerous in this district, and very much frequented by dealers in cattle, pigs, and sheep, between the northern and midland counties, for the supply of Manchester and other markets, and also from Ireland, nearly all the farmers, &c. are compelled to make use of these roads, and consequently did come in contact with infected animals.

7. I have found in general, that the servants or other persons have come in contact with other neighbours' infected stock, previous to their own becoming diseased.

8. I am of opinion that it is carried or communicated from one animal to another by contact, either actual, or conveyed by some intervening body in some shape or other, and not by atmospheric influence ; for I have known many cows that have been bought, during the last eight months, from farmers whose stock had not been affected, nor have been so since, yet these cows after being tied up in stalls where diseased ones had stood before, on the next morning had their feet affected, and on the next day their mouths, and in a day or two after this, the disease was fully developed : yet the remainder of the stocks whence these cows came have remained quite free yet, and which is more than four months ago. I also know several farmers who have not allowed any person connected with their cattle to go near the stock of another farmer where they knew the stock to be or to have been affected ; nor any other person to come amongst theirs, and certainly all who took such rigid precaution have escaped this pestilence.

9. The earliest symptoms I observed were, a staring coat, with



a rheumatic stiffness, and soreness of the whole frame—a painful and stiff unwilling gait, with much shaking of the feet. In a few hours they began to shuffle about in the stall—about twelve hours after this champing of the mouth appeared with sucking of the lips, a ropy, tenacious, slimy saliva constantly pouring from the mouth—perhaps, in another twelve hours the disease was fully established. There were some variations in different animals; but in eight out of ten, the progress was as I have described, the feet being affected before the mouth.

10. After the above symptoms, the posterior portion of the heels begin to look very red with inflammation between the cleft of the feet, and all round the coronets. In twenty-four hours there was separation of the integuments and ulceration, the parts being very tender and painful. Soon after, or already, vesicles appeared on the upper gums, the tongue, lips, and sometimes the nose, and which seemed to take the same course as those on the feet; and I have observed in many cases these vesicles extended to the larynx, and down the œsophagus. These I have seen in cases of post-mortem examination at the butchers, &c. This is the cause of the difficulty in swallowing which we sometimes see.

The teats now begin to be affected with the same kind of vesicles, and are a source of great evil, as from the pain and difficulty there is in milking, garget or inflammation of the udder frequently ensues. In many cases the disease terminated in congestion, either of some of the internal viscera or some external local part. Frequently near the udder, hip, stifle, thigh, knees, and other joints, it appears in the shape of large indolent tumors, which, on an incision being made into them, are found to contain nothing but coagulated blood in great quantities, and much blacker than usual. In three weeks or a month this blood dissolves into a brown thin sanious fluid, very fœtid, which on opening the tumour, discharges itself, and readily heals by the common means.

11. First bleeding, if attended early—always physic, and somewhat brisk in its character, if the case is not attended with diarrhœa. After the operation of the physic, strong diuretics, conjoined with diaphoretics, stomachics, and tonics; and, applied to the feet and mouth a solution of alum, sulphate of copper, and zinc.

12. From six to thirteen days, according to the intensity of the disease and the treatment, and whether it has been attended to at an early stage of the disease.

13. The number treated by me was 187: one cow being at her full time of parturition when the disease was raging on her, she

calved, and dropped two hours afterwards. She died in twelve hours. All the other 186 recovered.

14. The number in this neighbourhood, as near as I can ascertain, attacked by this disease was about 400 or upwards. Most of those which I did not attend, were treated by the owners through the instrumentality of Professor Sewell, who, it appears, first teaches the young veterinarian, in consideration of a certain fee, a profession by which he is to get an honourable livelihood from the agriculturist, and then instructs the agriculturist—gratis—how to cure his own stock without the assistance of the poor veterinarian, who has spent his time and money in the pursuit of this knowledge which would enable him to practise his profession creditably and honourably. I can enumerate 37 cows out of the remaining 213, that died under the complaint; and probably there are many more. This affords a pretty specimen of the advantage actually gained by the agriculturist from this gratuitous and unwarrantable interference.

15. Much less in quantity, and in some totally suppressed; very thin and poor in quality, and producing no butter, but a kind of cheesy curd.

16. Young cows, and those in high condition, suffered most, and were most difficult to cure.

17. I have not seen it in connexion with any other disease; but I have seen several cases where inflammation of the lungs has come on after the violence of the other symptoms was over. It yielded, however, to bleeding and physic.

18. Nine out of ten of those I had the opportunity of seeing got into condition very rapidly afterwards.

19. I have neither seen nor heard of its appearance in the same animal a second time; but I have known that, when a cow has been considered quite well, she has been commonly neglected, and in the course of a week or two some latent effects of the former disease have again shewn themselves, but not very difficult to get rid of. I should have stated that the pulse ranged from 50 to 80, and for the first three days was strong, full, and bounding. During this time I abstracted about 4lbs of blood, according to other circumstances, and that I have had no reason to repent of, but the contrary. I never bled after the third day, except quick and panting breathing came on, shewing the approach of pneumonia, which in severe cases was not unfrequent.

I am, dear Sir, &c.

P.S.—Just as I was going to seal up this account, the February number of *THE VETERINARIAN* made its welcome appearance: seeing in its index Mr. Wallis's account of the same

subject, I was very glad to find he had the boldness to speak his mind and support my views on the consequences of the Professor furnishing our employers with an account of the remedial measures, and which they have used to the exclusion of his own pupils. With Mr. Wallis's account, and in your prophecy of the actual bearing of the matter at the time Mr. Sewell's statement went forth, I perfectly agree.

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[We regret that Mr. Hayes should have been forgotten in our list of those to whom we ventured to apply for information on this subject. If there are any others in a similar situation, we do beg to assure them that the omission was perfectly unintentional, and that we should be most thankful for every contribution. Our brethren in Ireland, and in the north of Scotland, have it in their power most materially to assist us.—Y.]

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## A CASE OF MALIGNANT EPIDEMIC.

*By Mr. A. S. COPEMAN, Walpole.*

*Feb. 10th, 1841.*—A BAY mare pony, six years old off, high bred, and in rather low condition, belonging to Mr. A. Saker, of this place, was bought of a dealer who lost a mare from malignant epidemic about three weeks ago. This pony had been with her during her illness. She was yesterday observed to be dull and off her feed.

At 9 o'clock this morning the symptoms were as follow:—Pulse 50, weak and compressible; respiration 25, but neither deep nor painfully drawn; an occasional short dry cough; ears, skin, and legs cool; the mucous membranes of the eye, nose, and mouth pale; great heaviness and depression; with total loss of appetite, and the bowels torpid.

*Treatment.*—℞ ol. lini Oj, et pulv. zingib. ʒss; administer enemata of tepid water frequently.

6 P.M.—Pulse 54, and soft; extremities cold; no fæces passed: ℞ ol. lini Oss, zing. ʒij; enemas continued.

11th, 8 A.M.—Pulse 60, softer; ears and legs cold; respiration 19; mucous membranes a little injected. She dunged twice in the night. The fæces were coated with inspissated mucus. Hyd. chlorid. ʒj, gruel Oj: enemas continued

9 P.M.—Pulse 65; respiration 16; bowels relaxed. Sp. æther. nit. ʒiv, liq. ammon. acet. ʒij, pulv. gent. ʒij.



12th.—Pulse 60; respiration 12, and natural; the fæces fluid, and frequently evacuated. She has lain down several times during the day, but there was no indication of pain. Medicine continued, with thick starch.

13th.—The same as yesterday. Continue medicine, with plenty of thick starch; also enemata of starch frequently.

14th.—Pulse 65, weak, small, and tremulous; legs and ears hot; great prostration of strength; skin hot and dry to the touch; breath hot and offensive; she grunts when moved; the Schneiderian membrane of a scarlet hue, and bleeds from the slightest touch; urine in small quantity, and high coloured; the fæces watery. R pulv. opii 3ss, pp. cretæ, ziv, starch Oj, given twice in the day.

15th.—Pulse 70. The undulatory motion of the heart seen at her side; respiration 10; legs, ears, and skin hot; buccal membrane covered with a brown crust; breath fœtid; Schneiderian membrane livid; throat very sore; fæces fluid, very offensive; frequently lies down, but not so as to indicate severe pain. Pulv. opii ʒij, camphor. ʒj, sp. æther. nit. ʒj, starch Oj: boiled rice to be given frequently, and blister the whole extent of the trachea. Enemata of starch, with tinct. opii ʒj.

16th.—Symptoms same as yesterday; no fæces seen since last night; Schneiderian membrane of a leaden hue; buccal membrane ulcerated in several places. Cinchonæ ʒss, disulphate of quinine ʒss, given twice in the day. The blister does not act; repeat it, with sp. tereb. eight parts, potass. tart. ant. one part. The mouth to be washed, and the stable frequently sprinkled with a solution of the chloride of lime.

17th.—Pulse 90, and frequently intermitting; respiration 9; frequently lies down; extremities cold; the buccal membrane peels off in various places, leaving an unhealthy-looking surface beneath. Continue medicine, with port wine occasionally. Blister has had no effect.

18th.—Pulse 100. Worse in every respect. She seems almost a mass of putridity. I advised the owner to have her destroyed, but he would not consent; and the medicine, &c. was continued.

19th.—Pulse scarcely to be felt, and almost too quick to be counted. The excretions are expelled involuntarily, and are extremely offensive. A great deal of bloody fœtid mucus is voided through the rectum. I must still continue treatment; medicine, &c. the same.

20th.—She is a horrid spectacle, and so offensive that no one likes to go near her. At eight o'clock P.M. she died.

*Autopsy*, twelve hours after death. The mucous membrane of the cæcum, colon, and rectum in a state of gangrene; the sto-

mach and other intestines much inflamed, but decomposition had not there proceeded so far. The whole of the serous membrane of the intestines healthy ; so that the intestines might have been thrown aside as free from disease, if their mucous membrane had not been examined. The large intestines contained a considerable quantity of offensive fluid, bloody mucus, and fæcal matter.

The liver was congested, soft, and black ; as was also the spleen.

Lungs.—The pleura pulmonalis et costalis of a grass green colour at every part where they are in contact. The mucous membrane of the trachea and large bronchi gangrenous. The right lobe a mass of almost disorganized black fœtid matter. The internal membrane of the heart highly inflamed ; and both ventricles and auricles filled with black blood. Bloody effusion in the thorax and the pericardium.

## RESPIRATION,

ITS MECHANISM AND CHARACTERS ABSTRACTEDLY CONSIDERED.

*By Mr. R. PRITCHARD, V.S., Wolverhampton.*

Messrs. Editors,—I KNOW of but few if any subjects of more importance to the veterinary surgeon than the movements of respiration ; and I have chosen it for this present article from the circumstance of teachers and authors usually mixing up these phenomena with the general physiology of the lungs, evolution of animal heat, circulation of the blood, &c. It is indispensable to a clear illustration of the performance of respiration to give a brief description of the apparatus by which this all-important and vital function is executed ; and notwithstanding I am writing to a class of readers whom I presume to be acquainted with the anatomy of the respiratory organs and the ordinary effects of the process of breathing, still it is a subject pregnant with a volume of the most important information, and we cannot too frequently have our attentions directed to it, or become too deeply and intimately acquainted with its operations.

First presenting itself to our conception is the bony framework of the chest, bounded above and superiorly by the spine and ribs, as far as their angles—below and rather anteriorly by the costal cartilages and sternum—laterally by the sides and bodies of the eighteen ribs ; and posteriorly by a musculo-tendinous plane, the diaphragm. The interstices between the ribs

are filled by the intercostal muscles, of which there are two layers, the fibres of the one layer decussating those of the other. Besides these muscles are the serrati, superficial costal, transverse costal, and levator costal, all of which are agents in the dilatation of the thorax. The chest thus formed constitutes a close cavity, but allowing the passage of the trachea, œsophagus, and bloodvessels. The inner walls are everywhere coated by the pleural membrane, and by it divided into two principal chambers, one for each lobe of the lungs; and a third and subordinate one for the heart. Each of these principal cavities is occupied and filled by a most beautiful adaptation of the lungs; each lobe having its apartment entire and circumscribed.

The chest is an entire cavity: still the external atmospheric air has a free passage to its innermost recesses, from its entrance through the nostrils and nasal fossa, to the posterior chamber of the mouth. Here the air arrives at a very wonderful and truly surprising piece of mechanism, termed the *larynx*, composed of cartilages so constructed and arranged as to receive the operations of a set of muscles, by which this portion of the respiratory passage can be dilated, contracted, and, if necessary, closed. It is here that the peculiar intonation of the voice is effected, and a safeguard placed against the passage of every element or constituent, except atmospheric air, all others being foreign and noxious. Immediately posterior to the larynx the canal takes on a very different construction—it becomes a rounded tube, composed of cartilaginous rings, about fifty or sixty in number, called the *trachea*. The circle of these rings is not continuous, being separated behind by transverse and longitudinal fibres of elastic, or, perhaps, muscular tissue. This tube proceeds down the front of the neck, and, having arrived at the chest, passes between the two first ribs, and immediately divides into two trunks, called *bronchi*, one entering each lobe of the lungs, again dividing and subdividing to great minuteness, and ultimately terminating in small membranous vesicles whose diameters are said not to exceed the  $\frac{1}{40}$ th of an inch. The inner surface of the whole of the respiratory passage is lined by a mucous membrane, commencing within the nostrils, continuing through the larynx and trachea to the utmost point of its divisions, and probably composing the air-cell itself. This mucous membrane is covered on its free surface by a beautiful epithelium formed of cells, to which vibrating ciliæ are attached.

The heart, as before stated, is situated in the third and lesser chamber of the thorax. This organ is of a conical shape, and has its base directed upward towards the spine, opposed to the 4th, 5th, and 6th dorsal vertebræ. Its apex points downward and



backward towards the diaphragm, against which it comes in contact during expiration: it also inclines to the left side, so that the shock produced by its action is readily felt when the hand is applied to that side in the region of the organ. The heart contains four cavities, two on the right, and two on the left. The right side of the heart may be very properly termed the respiratory portion of the organ, considering the circulation as double, and the whole of the blood entering the right cavities passing from them to the lungs, through the pulmonary artery. This vessel arises anteriorly and superiorly from the base of the organ, and almost immediately divides into the right and left pulmonary trunks, each entering its respective lung, in company with the bronchial tube, and, like the latter, divides and subdivides to extreme minuteness, ultimately anastomosing over the air-cells in a most delicate mesh-work of vessels whose diameters do not exceed  $\frac{1}{3000}$  of an inch, or the square of the mesh-like structure more than  $\frac{1}{4000}$  of an inch in width. In the same degree of diminutive capacity commence the pulmonary veins, by a union with the capillaries of the arteries, and uniting and reuniting, thus increasing in size, pursuing their course towards the heart much in the same direction in which the arteries had left it, until, having arrived at the left auricle, they terminate in the superior posterior part of this cavity by four openings; and here the pulmonary circulation may be said to cease. The branches of the bronchial tubes and air-cells and the trunks of the pulmonary arteries and those of the veins are supported on every side by a plentiful formation of cellular tissue; the whole constituting, by an outward investment of the pleural membrane, the lobes of the lungs. This pleural membrane is a secreting surface, yielding a bland fluid, by which friction and adhesion are entirely prevented.

Having given a concise description of the respiratory machine, I proceed to explain its movements or mechanism. Respiration, or breathing, is composed of two acts; 1st, that of inspiration, by which air is taken into the lungs; 2d, of expiration, by which it is expelled from them. In the foetal state the lungs are passive, the trachea and bronchial tubes are without atmospheric air in them, so that the first act of life in an animal is that of inspiration. During the birth the umbilical cord is compressed, the circulation of the blood is obstructed, not only in the cord, but the whole circulation of the body of the foal is impeded. Upon delivery of the offspring the cord is ruptured. The pause thus given to the blood's progress imparts an impulse to the nerves of the respiratory muscles, the fibres of which, previously relaxed and passive, suddenly and actively contract, the chest is enlarged and a vacuum begins to form in the cavity, to meet which

the atmospheric air rushes through the nostrils, trachea, and bronchial tubes, and inflates the lungs. At the same instant the blood flows from the right side of the heart, through the pulmonary artery, to the air-cells; the living principle is received into the circulating fluid; and the pulmonary veins take up the vital current, and convey it onward to the left side of the heart, whence it is to proceed to serve all the purposes of the body. This is the first act in life—to *inspire*, or take air into the lungs.

The before-named muscles entering into the formation of the walls of the thorax, contract and raise the ribs. The diaphragm by its contraction flattens, and thus the capacity of the chest is increased, and the subsequent effects of inspiration are fulfilled. This first and most important act of inspiration is immediately followed by an expulsion of air from the lungs, partly by their own elasticity contracting; by relaxation of the inspiratory muscles allowing the walls of the chest to collapse; by the pressure of the atmosphere externally and their own property of resuming their original position; by relaxation of the muscular structure of the diaphragm, and by contraction of the muscles of expiration, viz. the abdominal external and internal oblique muscles and the transverse and recti muscles of the abdomen, which are all muscles of expiration. The most important of them are the external oblique, which muscles, by their contracting, force the abdominal viscera against the diaphragm and carry it upward and forward into the thorax, at the same time they also retract the ribs laterally, diminishing the cavity of the chest from behind forward by protrusion of the diaphragm, and on each side by compression of the ribs: by these agents the air is returned from the lungs, and the term *expiration* is applied to this movement. The whole of the air, however, inspired at the first ingress immediately following birth is never again wholly evacuated from the lungs,—a portion ever afterwards remains in the tubes. Even in the deepest and most prolonged expiration the lungs are never emptied of inspired air, as expiration carried beyond a certain extent, is met by increasing pressure of the atmosphere upon the larynx, and the moment that the powers of expiration are exhausted, a fresh volume of air enters the air-tubes, maintaining an equilibrium between the atmospheric pressure within the lungs and without the chest in beautiful counterpoise. These acts of respiration are principally performed by the diaphragm in ordinary breathing. It is the most important muscle engaged in the respiratory movement. Its extent of muscular surface and attachment extending across and constituting the large oblique posterior boundary of the chest, sanction a precedence to this agent above all the others employed in the mechanism of respiration. The muscular fibres of this mus-



cle are attached by digitations to the cartilages of the eighth and all the posterior ribs, but the two last, to the tip of the sternum, and by its cruræ to the inferior part of the bodies of all the vertebræ. When the fibres of this muscle are contracting, those of the intercostals contract consentaneously; and although co-operating in expanding and enlarging the chest, they act at the same time as antagonists to the diaphragm, by offering fixed points for that muscle to act upon, and become a flat plane, increasing the capacity of the chest in a very considerable degree. This is readily observed by the pressure of its posterior surface upon the viscera of the abdomen, rendering the abdominal walls more prominent. The intercostal muscles, situated as they are between the ribs, would, by their contraction, draw them towards each other, and diminish the capacity of the chest, acting as expiratory instead of inspiratory agents. But viewing the form of the ribs, their attachment to the dorsal vertebræ, to their cartilages, and these by acute angles to the sternum, throughout all the false ribs, by a dense fibrous lacing of the cartilage of one rib to that of its antecedent, it will be clearly seen the contraction of the interstitial muscles must carry the ribs forward and outward, increasing the dimensions of the thorax in width and depth at every part. Quiet inspiration requires no aid to the diaphragm but that of these muscles, which do assist in the expansion of the chest at all times: however, when inspiration is increased in number and extent, the other auxiliary muscles are brought into action. The large serratus muscles, by their attachment to the cartilages of the eight anterior true ribs, assist in expanding the chest in hurried respiration, the scapula being rendered the fixed point for the posterior portion of the muscle to act upon. The superficial costal muscles, by their attachments to the ligamentum subflavum, and to the prominent part of the ribs near their middles, must at once shew their prescribed office to be that of raising and forcing the ribs outward, and so dilate the chest. Lastly, we have the transverse costal muscles, attached as far forward as the transverse processes of the last cervical vertebræ, taking their course backward over the upper part of the ribs as far as the last one, giving attachments to all of them at their posterior edges, the vertebræ being fixed points, with two or three of the anterior ribs nearly so. By contraction of their muscular fibres, the angles of the ribs will be drawn forward and outward, and co-operate in dilating the chest. In tranquil expiration, muscular exertion is little demanded, the resiliency of the lungs and walls of the chest, and the balancing power of the atmosphere, are efficient for the purpose of restoring the chest and lungs to the state of momentary repose—the assistance



of muscular power being required only to finally accomplish the act. When, however, respiration is quick and tumultuous, from whatever causes (and which I intend to enumerate by-and-by), powerful auxiliary agents are required. The whole of the abdominal muscles assist to effect complete expiration by compression of the abdominal contents against the muscular partition opposed between them and the lungs; and this power of expelling air from the lungs by the abdominal muscles is invested in them to a much greater degree than at first view may be observed. Through the medium of the interposing viscera, the diaphragm is sometimes forced forward into the chest to an unusual extent, and powerful expiratory acts are observed in snorting, sneezing, and coughing. A limit, however, is set to a collapse of the lungs, by the rigid and unyielding tissues of the walls of the chest, and diminution in the capacity of the thorax cannot be carried beyond a certain extent, or complete collapse of the lungs takes place so long as the cavity is entire.

My readers may think the above enumeration of the agents of respiration somewhat prolix, but the necessity for an exact consideration of them will be observed as I proceed with the subject. The principal object in the consideration of this article is the characters of respiration. Having first described the machine, and secondly the mechanism of it, the next intention is to illustrate its operations by a description of the signs adduced both in health and disease. This brings me first to remark upon the proper development of the organs of respiration and their characters, as best enabling the animal to perform his most arduous achievements, and accomplish rapid and continued exertion at the least expense to his system. Most horsemen, either on the turf, the field, or the road, are acquainted with most of the external points essential to good *wind* in horses; but this is not enough for the veterinary surgeon to know. He must penetrate deeper than the surface, otherwise his knowledge, like theirs, will be but superficial.

The best conformation of the chest for respiration consists in its great length, depth, and breadth. Every horse has the same number of ribs, but they are very differently formed and affixed to the spine and sternum. The ribs should be broad, their superior angles well advanced outward and backward from the spine, well separated from each other in their interstices, and of good length. The cartilages also of the true ribs should be long, giving depth at the sternum. In a chest thus constituted, the fibres of the intercostal muscles would be long—the diaphragm broad and powerful—the other costal muscles would be extensive—the attachments of the external abdominal oblique would be proportionately large, as would the whole of the respiratory mus-

cles. In such a chest the lungs would be large, and the heart too, in all probability. To these should be added a fine, well-formed nostril, capable of dilating; a large nasal fossa; a capacious glottis and rima; a roomy windpipe, and wide bronchial tubes, even to the air-cells; the pulmonary artery and veins should be large, giving bulk to the lungs by bloodvessels and air-tubes, and not by interstitial cellular tissue. When the muscles of the body are in rapid motion, contracting in active succession, the blood flows through the veins of the body to the right side of the heart with increased velocity; a corresponding circulation is indispensable through the lungs, otherwise the right side of the heart must be distended with blood, and general venous congestion ensue. The increase of the blood's motion through the veins is not depending so much upon an augmented force of the arteries as upon the action of the muscles. Give a lock of hay to a horse while he is being bled, and the motion of his jaws in eating will exhibit this phenomenon of the venous circulation. The respiration must increase in proportion to the circulation, for the blood, returning so much quicker and oftener to the heart, requires the lungs to be expanded in frequency corresponding with the action of the heart, in order to admit the blood through them. The blood, also, in the pulmonary arteries is the darkest and most venous of any in the body, and, of course, less fluid; therefore it is essential to free respiration, that the pulmonary arteries should be large. There is less probability of congestion in the venous system within the lungs, for the blood in them, being in the highest degree of vitality and fluidity, will pass readily to the left side of the heart: but the bronchial tubes are required to be large, together with the air-cells, which, as I have shewn, are continuous formations of the tubes; and unless the atmospheric air can pass with facility to the air-cells, the pulmonary arteries, however equal to the performance of their prescribed function, would be unable to deliver the blood into the pulmonary veins. The most fatal congestion of blood that can possibly take place within the body, is that of the capillaries anastomosing over the air-cells, an event which must take place in degree proportionate with the obstruction through the bronchial tubes.

[To be continued.]

## ON VENTRAL HERNIA.

*By JOHN TOMBS, Esq., V.S., late Bengal Artillery.*

ON perusing THE VETERINARIAN for December last, I observed a case of hernia, unsuccessfully operated upon by Mr. Rush. I deeply regret that the operation was a complete failure, as it was undoubtedly performed in a surgeon-like and scientific manner: but the impression on my mind is, that this method of reducing ventral or umbilical hernia is attended with imminent danger. Those deep sutures unquestionably cause a great degree of inflammation in the surrounding parts, and the peritoneal lining of the abdomen must sometimes necessarily become involved in the inflammatory action caused by them, which invariably terminates in death. If the peritoneum escapes, the muscular parts and integuments may frequently become gangrenous, the result of which is well known: and, lastly, extensive sloughing may take place, so as to admit a protrusion of the intestines, which equally endangers the life of the patient.

I am not aware of any case doing well after this kind of operation has been performed, with the exception of the "old black mare," so cautiously and skilfully operated upon by Mr. Simonds, which redounds greatly to his well-earned fame in the veterinary world, and that of Mr. Hickman.

I have met with many cases of punctured wounds of the abdomen, where the intestine has protruded. After replacing the portion of gut, I brought the lips of the wound in contact by means of superficial sutures, never introducing the needle deeper than the first layer of muscular fibres. Peritonitis and gangrene took place in some; but by far the greater number recovered.

After condemning one method of operating, it becomes me to point out a safer. A more scientific one I cannot; but I think I can a less dangerous one, and that is an object of great consideration to the practitioner who has reputation at stake, and to the owner of the animal likewise. The operation I allude to is, I believe, attended with invariable success. It was practised by the farriers of old, and is so to the present day by many skilful veterinary surgeons, and very many modern sow-gelders. My late lamented father and uncle, and Mr. Rawlins, the well-known cattle practitioner of Milton, in Oxfordshire, also my brother, and myself have operated upon vast numbers of colts annually; and I unhesitatingly assert, that nineteen out of twenty do well after it. I only know one case of tetanus occasioned by the operation, which I am about to describe.



The animal seldom undergoes any preparation, being only fed sparingly for a day or two previous. He is cast on his back; the operator returns the bowel, and gathers in his hand all the loose integument over and for a considerable distance round the hernia. He then pushes three or four iron skewers, about six inches long, transversely through the skin, and one or two longitudinally over the hernia, and a strong cobbler's end is tied under the skewers, and drawn very tight. The skewers are next twisted round with a pair of pincers, otherwise the points would penetrate the skin of the adjacent parts of the abdomen when the animal lies down. The patient is then liberated, and kept short of food and water for a few days.

Active inflammation is set up in the parts, and the aperture is very soon filled up with granulations. In about ten days or a fortnight the integument, skewers, and ligature all slough off together, a formation of new skin takes place over the granulated surface, and the animal has then unrestrained freedom.

In the autumn of 1839 I operated upon a filly, by Safeguard, out of a half-bred mare, three and a half years old. It was an unusually large umbilical hernia, the length of which was five inches, breadth in the middle two inches, and at each end one inch. The portion of protruded gut would have filled a half pint cup. She was kept on bran and slops for a week. Very little swelling ensued. She was neither bled, physicked, nor lotioned. Sloughing took place in ten days, and she was turned out in a fortnight after the operation, cured.

The Worcestershire fox-hounds threw off in the beginning of last December at Lord Coventry's seat, Severn Bank, and found a fox in a piece of gorse near the far-famed Perton Pool. They had a tremendous burst for about three miles. I was with them, and had the gratification of seeing this same filly out, ridden by Mr. Williams, jun., trainer, who was up at the check, during which time he rode over three or four stiff round cut hedges, and she cleared them in good style. She was recognised by several old sportsmen, who were deterred from buying her when she had hernia, thinking she would be useless to hunt or breed from. They congratulated me on my success in reducing the hernia, at the same time stating they had thought that it was morally impossible to do so. No person can now see that she has ever had hernia. Her owner was offered fifteen pounds for her previous to the hernia being reduced, and since that time he has been offered forty-five guineas. I think in another year she will prove an out-and-outer, or, in other words, a star of the first magnitude in the chase.

I omitted to mention before, that the rupture was observed when she was six weeks old.

I must now bring this rambling letter to a conclusion, thinking that I have written sufficient to convince any incredulous person, that the mode of operation which I advocate is preferable to that of Messrs. Simonds and Rush, inasmuch as it is attended with less danger: nevertheless, I shall be most happy to hear of success at all times attending the modes of operating pursued by them or by others.

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## ON THE TREATMENT OF HERNIA.

*By Mr. JOHN KENT, V.S., Bristol.*

HAVING read Mr. Rush's report of the fatal result of operating for hernia, and having, in the course of my practice, treated a considerable number of cases with uniform success, I am induced to report my plan of treatment.

Prior to my becoming a pupil at the Veterinary College, I had seen hernia cured by passing a strong pin through a portion of skin over the part, and tying a string round it so tight as to cause it to slough, inferring from this that the hernia was reduced by the pressure produced, and the lesion healed by the adhesive inflammation excited. When I commenced practice on my own account, I applied a blister over the part, and when the inflammation produced by the blister was sufficiently subsided, I put on a pitch plaister, and over that a slight bandage, and have ever since adopted the same plan. Colts at grass I have let remain out during the whole time; but with horses in the stable, I first purge the animal, and keep it on corn alone.

I have recently had a case of hernia in the linea alba, about an inch from the prepuce, and in length about four inches. The animal left my stable in December last, and is now well.

In cases where the opening was small, I have succeeded by repeated blisters, without farther treatment. A few years ago another practitioner was applied to in a case of scrotal hernia in a sucking colt; but, he expressing fear of meddling with it, I was sent for by the owner to castrate it. On my arrival, I found that the testicles were not descended into the scrotum, which was very much distended. I directed the colt to be weaned and kept badly, in order to make it pot-bellied, with the view that

the centre of the belly should be lower than the opening leading to the scrotum, and blistered the scrotum with tinct. lyttæ once a fortnight. Without any other treatment it got well.

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## WEST CORNWALL AGRICULTURAL REPORT.

THE Editor of this Journal has seldom read with greater exultation the Report of an Agricultural Society than he did that of the *West Cornwall*, about a month ago. It required no little mental courage, as well as sterling kindness of heart, to wind up the report of an agricultural meeting in such a way. It does our friend, Mr. Karkeek, the secretary of that society, immortal credit; and it was difficult to say, whether surprise or delight most prevailed when the business of the meeting was thus closed. He had been giving an account of the agricultural business of the season, and he thus concludes his review:—

“ But among the objects in farming, which require particular attention at this time, there is none whose claims are more imperative than a careful attention to live stock, which at this season suffer more than at any other. Let the farmer, then, look well to his sheep, and particularly his breeding ewes. Let him attend to their comfort, their cleanliness, and warmth, and beware of keeping them wet, or in exposed situations. During severe weather, both mother and offspring suffer much; and, consequently, the kindness and humanity of the farmer and the shepherd have more scope for exertion in the management of sheep during the lambing season than occurs with regard to any other stock. The lambing field should always be a sheltered one; and if not adjoining the farm buildings, a temporary shed should be erected, where the weakly lambs may obtain refuge from the cold. In many cases have we witnessed the benefit arising from the fostering care of the farmer’s wife in supplying the lamb with warm milk as carefully as she would her own offspring. Such nursing will, in most instances, enable the tottering lamb to regain its mother.

We witnessed a case last season, in which, from the want of proper care, a poor ewe had fallen into a ditch to rise no more. Unable to lift her head from the ground, she held up her leg in order to invite her starving lamb to the miserable pittance which her udder could still supply. In a human being a display of equal parental attachment would excite our love and admiration; and why do we not admire it in the sheep? Because we do not



sufficiently know, and therefore cannot adequately appreciate, the good qualities of our quadruped dependents. Natural history, however, exhibits, in a variety of most affecting incidents, qualities in brutes which ought at once to endear them to us, and to awaken in our hearts a kind solicitude for their well being, and an anxious concern to afford them every opportunity of illustrating and improving those charities of their social nature which powerfully attract them to each other and which bind them to man when he does not savagely throw impediments in the way of their intercourse with him. In this respect we may learn from these creatures

“Many a good  
And useful quality, and virtue too,  
Rarely exemplified among ourselves;  
Attachment never to be weaned, or changed  
By any change of fortune, proof alike  
Against unkindness, absence, and neglect;  
Fidelity, that neither bribe nor threat  
Can move or warp; and gratitude for small  
And trivial favours, lasting as the life,  
And glistening even in the dying eye.”

This is no overcharged picture; and if any one doubts its truth, let him read “Youatt’s Obligation and Extent of Humanity to Brutes,” and he will then acknowledge that

“The heart is hard in nature, and unfit  
For human fellowship, that is not pleas’d  
With sight of animals enjoying life,  
Nor feels their happiness augment his own.”

There is another young animal that, during this inclement season, particularly requires the care of the farmer—the colt; and of all unnecessary cruelty to which the horse is subject in the different situations in which he may be placed, none is so pregnant with mischief as that which arises from the miscalculating system of economy that denies him the food and shelter he requires in the earlier stages of his existence, particularly during the winter months. It was but a few days since that my attention was directed to a couple of colts exposed in the open field, with scarcely a tree or hedge to shelter them from the northern blast; and having only a small quantity of straw and a few turnips allowed them for food. The following night there was a severe snow-storm, in which every living creature looked around for shelter; but, alas! the poor colts found none. The care they so much needed was denied at the proper moment; and it was afterwards bestowed in vain: for though they were taken into a warm stable, and received every possible attention, yet one of them died; and the survivor is a poor dispirited creature, listlessly dragging

his limbs along, evidently in weakness and pain—a sad specimen of poverty and misery. We know that it is the opinion of some farmers, that any thing is good enough for young colts. Avarice or gross ignorance is too often “father to the thought;” and hence the colt is starved in winter—hence the enfeebled frame and distorted limbs which hunger and cold produce—hence the working of the colt too early and too much; and hence the miserable, worthless breed which the county at present possesses.

We have now established in various parts of Cornwall “Farmers’ Clubs,” for the collection and diffusion of scientific information; and Agriculture is advancing with giant strides under the powerful influence of chemical and geological studies. Let us hope that the inculcation of the duty of humanity to the inferior animals will not be considered beneath the notice of these institutions.

*Cornwall Gazette.*

[We readily and thankfully give admission to the following letter. It is a pleasing accompaniment to the foregoing extract.—Y.]

## ON HUMANITY TO THE HORSE.

*By Mr. KERR, Veterinary Surgeon.*

TO THE PUBLIC.

Most injured beast!

Thou hast not touched thy corn, though starv'd thou seemest:  
Thy suffering intense hath robb'd thee of thy sense of hunger.  
*Arise, my master bids me harness thee for labour!*

It is to be deplored that scarcely a day passes without our newspapers reporting some unmerited and brutal punishment inflicted on the silent and suffering horse; but there is another species of cruelty constantly in practice, though unnoticed, to which the whip bears no comparison, since that pain is of short duration. I allude to the torture continued to the worn-out and aged horse, without intermission, for months, and even years, from some painful and incurable disease of the feet.

Who denies his claim to our protection? Monarchs gladly avail themselves of his services during his days of beauty,—glad

of his aid in their regal processions,—glad of his mighty power in the field of battle! How would commerce miss his assistance! How ready are we, then, so long as it suits our own selfish purposes, to caress him, and admire and extol his worth! but when the violent and rapid exertion which we call on him to perform during his best days has completed its work of mischief on his lungs and feet—when their structure has become destroyed, and his breathing is performed, even in a state of non-exertion, with distress—crippled with constant and acute pain in his feet—in this state of misery and suffering *the owner is permitted to offer him for sale*, and obtains from three to five pounds. He is sold to a proprietor of night-cabs and hackney-coaches, to drag through his wretched existence so long as his animal machinery will hold together, and he is cruelly kept in harness the whole of the night, from ten to twelve hours, without intermission.

The better style of horse in our day-cabs, hackney-coaches, and omnibusses is very apparent; but even among these there are many whose sufferings *should and ought, by legal authority*, to be relieved by death.

Let the feeling and thinking public reflect but for a moment, while they are lolling at their ease in one of these public conveyances, that their luxury and comfort is purchased at the expense of *torture to the silent, suffering, though still willing horse*.

Let this feeling of commiseration prompt the public to adopt a simple but most effectual method I beg to recommend for the entire removal of this abuse. The remedy is simply this: every person in want of a cab or hackney coach should be at the trouble to walk down the stand and select that conveyance, the horse or horses of which indicate by their general appearance to be in a condition to endure fatigue, by standing firmly and evenly on his legs, and leave *at rest the suffering cripple*, who may be known by standing with bent and relaxed limbs; constantly shifting his position from pain, or pointing alternately one or other of his fore-legs forward, in order to place it from out the centre of gravity, thus escaping, in a great degree, the superincumbent weight and consequent pain: by this means mercy is shewn to the poor animal by not calling on him for exertion, while punishment is inflicted on the proprietor by not hiring his conveyance.

If the public would thus steadily act, they would in a short time, to a certainty, have the pleasing satisfaction of entirely suppressing this cruelty; they would enjoy the happiness of knowing they had lessened animal suffering; they would reward the humane horse-master, punish the offender, and most certainly be carried with greater safety and speed on their way.

I am, &c.



## CONSULTATIONS.

## No. XX.

## THE MANAGEMENT OF THE EWE PREVIOUS TO LAMBING.

My dear Sir,

A NOBLEMAN—a very extensive agriculturist and grazier, by whom I am employed, has, within the last few days, lost several of his best true Down ewes, just ready to drop their lambs. There are several hundreds of the true Leicester and Down Leicester breeds in the same flock; but they are all doing well at present. They are pastured on a fine rich elevated park, the feed short, folded at night, and allowed good hay. The best of them are generally the first and the worst attacked.

*Symptoms.*—They stray from the rest of the flock; lie down; toss their heads and grind their teeth. If suddenly disturbed they jump up, and then frequently topple heels over head. They at length, however, rise, or lie and look dull, sleepy and stupid. They walk stiffly, and with their bellies tucked up; and after going a little way they lie down and are unable to rise. The appetite is lost, and rumination ceases. These are the principal symptoms, varying much in degree. Their pulse and respiration are little affected, except when the animals are excited. The legs and ears are generally warm, the mucous membranes of their natural colour. The disease generally terminates fatally about the fifth day from the first attack. A few that have been bled seem to rally a little, and are certainly better. They were all bled when this disease first appeared.

*Post-mortem examination.*—The liver very pale, of a light yellow-clay colour, and containing but little blood.

The lungs.—The parenchymatous substance filled with thousands of minute round, red, or yellow spots, from the size of a pin's point to that of a pin's head. When cut into they contain either blood or yellow serum—in some few, pus: but from their minute size it is difficult for me to describe them.

The brain.—In that part of the dura mater opposite to and just below the frontal sinuses, there was a black and soft effusion, easily wiped off. The substance of the brain was a little softened, but otherwise healthy. Every other part of the animal was minutely examined, and was perfectly healthy. The sheep were rather fat for breeding sheep, and two fine lambs in each of them. The stomachs and intestines were healthy, and contained but little food.

A. S. C.

## REPLY.

1, Osnaburgh Place, New Road,  
6 March, 1841.

My dear Sir,

I fear that my reply may not be quite satisfactory to you ; yet I have not much doubt as to the cause of the mortality among the ewes of your employer.

I have been accustomed to trace a great deal of this mischief to the condition—*the too good condition*—of the ewes. You tell me that they are “in a rich elevated park, and allowed good hay, and that the best of them are the first and worst attacked.” It is true that the “feeding is short ;” but there is good hay added to this “rich” although “short” feeding ; and there is the general belief among the best flock-masters that few things are more dangerous to a ewe pregnant and near her time than any, even the least, increased quantity of stimulating food.

Then you tell me that the dura mater was evidently affected, and the brain a little softened, and the parenchymatous substance of the lungs filled with thousands of minute round, red, or yellow spots, containing blood, or yellow serum, or pus.

My advice is very short. Change the pasture, and lessen the quantity of hay.

I am, my dear Sir, faithfully your's,  
W. YOUATT.

## ON THE USE OF THE PULVIS ANTIMONIALIS.

By R. B. SWINFEN, Esq., M.R.C.S., Leicester.

Sir,—FEELING a pleasure and deriving much information from the reading of works on veterinary medicine and pathology, and, among others, that valuable monthly periodical, THE VETERINARIAN, so ably conducted by yourself—I was led, in taking up a late number, for June last, to read some remarks on a case of Hepatitis in a terrier, attended by Mr. Rolfe, which I should have passed over in silence had it not been that your sanction is given in a note. How far the treatment was good or bad, it is not my purpose to question ; but I am anxious that the profession should know your reasons for approving of the use of the Pulvis Antimonialis—a preparation which is now expunged from the London Pharmacopœia, and has long been held by discerning practitioners as perfectly inert and innocuous in its medical properties.

I recollect an eminent physician, Dr. Parkinson, more than twenty years ago, giving the same opinion upon this useless preparation, and at that time he invariably prescribed the Antimonium Tartarizatum in all cases requiring the use of an antimonial. His success in practice was no doubt increased by his using an efficient preparation, while other practitioners were deceiving themselves in administering one now happily exploded in human pharmacy. That it is equally useless in veterinary practice careful observation will confirm; and it is probable that, on reading over Mr. Rolfe's letter, your particular attention was not called to this preparation prescribed by him; and it is for the sake of himself and others, and that so high an authority as yourself should not be suffered to remain in apparent approval of its use without giving you an opportunity to explain, that I venture to call your attention to the subject.

I am, Sir, &c.

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[This letter would have been much earlier noticed had it not been unfortunately mislaid; for I had not forgotten it, and wanted to say a word or two about the "pulvis antimonialis" being omitted by my friend Mr. Morton, in his excellent *Manual of Veterinary Pharmacy*.

When I came to the metropolis, thirty years ago, the antimonial and James's powder were in considerable repute among the practitioners of human medicine. They were supposed to be valuable sudorifics, and were employed under various febrile diseases.

The veterinary practitioner seldom, perhaps, employed the James's powder, on account of its cost; but several with whom I was then acquainted occasionally had recourse to the Antimonial powder. With Mr. Blaine, whose contributions to the advancement of veterinary science can never be too highly appreciated, it was a favourite. Mr. Bloxam, Veterinary Surgeon to the 1st Life Guards,—an admirable scholar, as well as an excellent practitioner,—used to trust to it alone in the treatment of epidemic catarrh in the horse, and in every disease in which it seemed expedient to produce a decidedly diaphoretic effect; and, most certainly, he was very successful in his treatment of these cases.

Mr. Blaine, however, before he retired from practice, began to dislike the frequent uncertainty in the effect of this medicine, which he was compelled to witness, and he gradually abandoned its use, and had recourse to the emetic tartar in combination with the nitrate of potash, which he had always



given. This occurred several years before that valuable opinion to which Mr. Swinfen alludes was given by Dr. Parkinson.

The disciples of White continue its use, and so, I believe, do some respectable practitioners; but, generally speaking, it has given way to emetic tartar, which has its full diaphoretic, without its emetic effect on the stomach of the horse.

He would be a bad practitioner who gave either the one or the other to cattle.

There is, however, another patient—one which the veterinary surgeon is beginning to consider a little worthy of his care—the dog. Nature has formed him with a most irritable stomach—even the grass which he plucks will cause him to vomit. In him the use of emetic tartar is altogether precluded, except as an emetic: but we want, as in distemper, and in many febrile or chronic diseases, a determination to the skin, which the antimonial powder readily produces. Hence, and in cases like these alone, are we permitted the use of this drug. Many a case of fever and distemper is saved by it. It is, in a manner, our sheet-anchor in distemper.

We feel grateful to Mr. Swinfen for addressing us on such a subject ]

Y.

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## ON DEEP FIRING.

*By Mr. JOHN SCOTT, V.S., Kildare, Ireland.*

BEING determined to test the truth of the assertion, that *deep firing* would produce destructive sloughing, and even death, and relying on the faithfulness of Mr. Turner's report of the operation, I fired a three-years old black colt for a large splent, situated close to the knee, on the inside, and causing great lameness. I made three longitudinal incisions with the iron, at as near to a white heat as I could obtain it, quite through the skin, and extending the whole length of the tumour—the middle or central incision being the deepest, and penetrating to the periosteum, which I divided from end to end over the enlargement.

The operation was performed on the 18th of Oct. 1838, the horse having been previously prepared by reducing his system to comparative weakness—his keep for four or five days consisting of bran mashes and water supplied sparingly. I applied cold water to the wounds for twenty-four hours without ceasing; and occasionally, until the fourth day, when its use was discon-

tinued. The horse was returned to his owner in a month, almost freed from lameness; and in the course of the following spring was put to posting, at which work he continues. I have seen him repeatedly *pulling* (for such is his temper) heavy carriages over our Mackadamized roads without any apparent inconvenience from his fired leg.

CASE II.—On the 3d of January, 1839, an eight-years old bay horse was brought to me very lame on the near fore-leg, from broken down sinews, and perhaps diseased fetlock joint. The branches of the suspensory ligament were hard and thickened. I lowered the horse as in the former case, and fired him through the skin with *the red-hot iron*, making four wounds, each seven inches in length—in front, at the rear of, and on each side of the fetlock-joint. I took four quarts of blood from the jugular vein, and immediately commenced a fomentation with cold water, which was continued without interruption for three days. On the second night two quarts of blood were drawn from the plate vein. On the fourth day suppuration commenced, and I then allowed my patient some hay.

The widest and deepest parts of the wounds measured as follows:—in front, three inches wide, one inch deep; on the outside, one inch wide, one inch deep; at the back two inches and a half wide, but scarcely more than skin deep; on the inside the wound did not separate widely.

The symptoms on the 6th day were copious suppuration, weak cough, sloughy effluvia from the wounds. I gave a diuretic ball, some hay, and bran mashes.

On the 7th day there was dulness, and fatigue from standing. I allowed bran mashes and hay.

8th day.—I increased his keep. He was observed to rest the fired leg in order to keep it relaxed, and only to stand upon it when the other fore leg was tired. The circumference of the inflamed leg, at the thickest part of it, was sixteen inches; that of the sound one at the same part, namely, opposite the sessamoid bones, ten inches.

9th day.—The fired leg was painful. It was often lifted, and held in the air—the pulse quickened—the fæces in small quantity—the tips of the ears cold and moist, with a discharge of a gelatinous nature from the wounds. By the abstraction of one quart of blood from the jugular vein the action of the heart became slower and weaker. I gave him a purging ball, and a mild diuretic at night, and fed him on mashes only.

10th day.—The horse is easy—the pulse quiet—the leg not painful—the diuretic acting—no sign of purging—the tendon

of the *extensor pedis* bare—the fired leg kept in a less relaxed position.

*11th day.*—The horse has purged—fifty hours since the administration of the aloes. The leg straight, but not much leaned upon. Allowed hay, which he ate with avidity, but refused mashes.

On the *15th day*, a slough of the *extensor pedis* five inches long, and thin, separated and was removed.

*16th day.*—Allowed as much hay as he would eat, and bran mashes—fæces too dry and hot—pus from the wounds thinner and more lymphoid—limb fomented with warm water, with evident benefit.

*18th day.*—The horse walked firmly upon the fired leg: white curd-like discharge from the nostrils, and cough. Allowed one feed of oats daily.

*21st day.*—Condition improved. I fired him lightly for curb, and applied a blister.

*22d day.*—Repeated the blister.

*24th day.*—The horse labours under inflammation, and there are symptoms of colic. Bled to three quarts, gave four ounces of oil of turpentine, and one ounce of aloes in a ball, and repeated the dose of turpentine. It relieved him; but in about four hours the symptoms returned, and it was only by the administration of half a pint of oil of turpentine and half an ounce of opium that relief was obtained. The horse was purged, and hot applications to the loins and abdomen were used during the affair with advantage.

It is unnecessary to enter farther into the particulars of this case: let it suffice to say, that about the 1st of March he was sent to his owner, who soon after put him to farm work. In the beginning of May, four months after the operation, I saw him. I had him taken from the harrow, and trotted. His lameness was not considerable, and his condition was improved. He was used as a post horse; but died of colic in the summer of the same year, on his return from one of his stages.

In six other cases, and three of them of the hock, I fired through the skin, and found that, after the application of cold water, as described, four or five days, an ointment composed of Venice turpentine, spermaceti ointment, camphor, lard, and oil of origanum, would soften the skin, and promote suppuration and healthy granulations. Wherever fungus appeared, I applied muriate of antimony, or nitrate of silver. I have not had sufficient experience of the effects of the operation as a means of cure to be able to offer it to the profession with the confidence I rest assured Mr. Turner is justified in; and should these lines, as un-



doubtedly they will, meet his eye, I would take the opportunity of thanking him for the many benefits I have derived from his valuable contributions to your Journal. In the hope of seeing many successful cases of *deep firing* related in the pages of THE VETERINARIAN,

I remain, &c.

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## A CASE OF TETANUS IN THE HORSE, CAUSED BY THE GALLING OF THE CRUPPER.

*By Mr. W. J. HINGE, V.S., Hounslow.*

*December 16th, 1840, at 9 P.M.,* I was requested to attend an aged brown gelding, the property of a gentleman in my neighbourhood. I at once recognized that direful disease, tetanus, fully developed. The jaws were completely locked—the muscles rigid—the ears erect, as if listening to some sound—the tail elevated and quivering—the *membrana nictitans* partly drawn over the eye—the pulse 40—the respiration very much disturbed.

On examination, I found a wound under the tail, six inches in length, one inch and three-quarters in breadth, and, in one place, nearly half an inch in depth, which, the owner told me, had been there during a considerable period. It was in a state of gangrene. He had worked, with the crupper pressing upon him, on the previous day for about an hour in a very cold wind and severe frost.

I at once bled him until he staggered; but this had little or no effect on the spasmodic contraction of the muscles. I then applied a sheep-skin to his back and loins, and well clothed him up, and gave him forty drops of croton oil on his tongue, administering also an injection, and well stimulating his spine. The owner would not have him blistered.

The saliva from his mouth was immense, which I imagine was caused by the spasmodic contraction of the muscles of the pharynx impeding the power of deglutition. He moved very unwillingly. On visiting him again in a few hours, the disease was still raging with all its fury, on seeing which the owner said he would have no more done for him.

*17th, at 6 P.M.*—The pulse and respiration strangely increased, with less inclination to move. *At 12 P.M.* death closed the scene.

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[We insert this first communication from Mr. Hinge on account of the unusually violent symptoms and rapid progress of this horrible disease, and its being the first recorded case of tetanus arising from such a cause.—Y.]

## ON WORMS IN THE BRONCHI.

*By a COUNTRY PRACTITIONER.*

HAVING had many cases of worms in the air-passages, and this being a nuisance very prevalent in this part of the country in the summer and autumn, and known by the name of *Hoose* or *Husk*, I have selected a few cases from my records of practice, if you think them worthy of insertion in your valuable Journal.

*Sept. 3d, 1840.*—I was called to see seven calves that were affected with this disease. The owner had already lost five, although—as he said—he had tried every thing. The symptoms were, respiration hurried—staring coat—a dry husk—heaving of the flanks, with difficulty of moving, or unwillingness to move. They were reduced to perfect skeletons: two were then fast sinking. The treatment consisted of inserting setons in the dewlap, and blistering the lower part of the throat. Each had from half an ounce to an ounce and a half, according to their age, of a mixture once a-day, composed of sp. terebinth. six parts, tincture opii and balsam of sulphur, āā one part, with gentian and ginger, of each ʒj. Five soon recovered; the other two died on the second day, after having taken two doses of the mixture.

On examining the lungs, they appeared quite filled with these parasites, some of which, when washed and examined, were brown, and appeared dead; the others were quite alive. I had a great many under treatment during the last autumn, and was very successful after I began to administer the turpentine; but I never gave the tonic except in the case abovementioned, and when the patients were in such an exceedingly debilitated state.

I have found the disease to follow the keeping of the animals upon a bare pasture, from the latter end of May to the beginning of August, and with a bad supply of water. Cows are sometimes affected.

I know a farmer that poured half a tea-spoonful of oil of savine down each nostril, and with great success, holding the muzzle up for a little while after the oil had been administered. He informed me that he never had occasion to repeat the dose.

I have to thank Mr. Morton and you for the account which you give of the effect of the spirit of turpentine in these and similar cases. In his “Pharmacy,” page 278, is the following paragraph quoted from you:—“From the rapidity and great extent with which it is taken up by the absorbents and carried into the circulation, and the destructive effect which it is known to have on intestinal worms when otherwise brought into contact with them, the trial of its power would be justified in bronchitis,

the frequent and fatal concomitant of which is, the presence of thousands of worms in the air-passages."

The reading of this caused me to give the turpentine a trial, and I am happy to inform you that it has quite the desired effect. In slight cases I have omitted the tincture of opium, and given the spirit and balsam twice a week with evident benefit. Generally three doses are sufficient in these cases. I hope ere long to hear of others trying it, and with the same success. At a future time you shall hear from me again, with my name and address.

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## ON THE EFFECT OF CERTAIN WEEDS ON THE HORSE AND THE COW.

*By Mr. W. MOGFORD, V.S., Guernsey.*

I HAD intended, as intimated in my last, to hazard some remarks on the present epidemic; not, indeed, as the result of my own observations, for, strange as it may seem, although between two fires, and the disease having appeared in Normandy as well as in England, I have as yet met with nothing which in extent or in degree of development could be compared with what you have experienced.

I had, however, been struck, in reading your preceding numbers, with the coincidence between the effects there specified and those produced, much about the same time, by noxious herbs in cases under my treatment. The similarity was so great, that I imagined some such cause had more to do with the prevailing disorder than was generally apprehended, and had therefore intended to throw out the hint by way of awakening attention to it. Of course, after the more minute details which I have seen, my surmise is entirely out of the question.

Will you, notwithstanding, permit me to lay before you the facts which seemed at first to justify my inference? Although not adduced in connexion with the epidemic, I venture to hope they will be considered by some of your readers as not altogether destitute of interest.

Some time ago, I was sent for by R. S. Heysham Esq., the "Nimrod" of our island, and one of the best judges of the horse I have ever met with. He wished me to see two colts of his which he considered exhibited symptoms of suppressed strangles; and from the swelling of the maxillary glands, the inflammation of



the eyes, the enlargement of the lids, and the depression of spirits, they certainly were accompanied by symptoms presenting a strong resemblance to such cases. There were chaps on the muzzle, and a simultaneous breaking out at the heels; but on careful examination I attributed these appearances to the presence of *wild parsley*, which grew in great abundance in the field in which they were when I first saw them. Other symptoms there were, for which at the moment I found it difficult to account. On reflection, having observed in the course of my practice, as indeed, I have already stated in *THE VETERINARIAN*, that some of the effects then exhibited were brought on by the animals eating crowfoot and hemlock, I thought it not improbable that an examination of the pasture might solve the mystery; the former affecting the mouth and eyes, and the latter the coats of the intestines. In one of the colts this last symptom was very evident, for the rectum had a considerable deposit between its coats, and was so incapacitated for its functions, that for nine or ten days the fæces were expelled only by the assistance of the hand, or by injections. I was somewhat foiled in my surmises by looking over the field in which I found them, for neither of these poisonous herbs were to be seen. Being informed, however, that they had recently been removed from another pasture, I soon found, on inspection, that my conclusions were well founded.

This and other cases which I have lately had under my care confirm my conviction, that if, in harmony with the views so well given by that indefatigable investigator, Mr. Morton, in his last year's oration, we were more minutely to examine the secrets of the vegetable kingdom, we should attain to a greater familiarity with many causes of disease.

Having been favoured with the following description of the cases above specified by the respected proprietor, perhaps, as it contains a confirmatory testimony to the truth of my statement, and as it supplies a still more particular account of the features which marked both the complaint and the cure, you will do me the favour of inserting his letter.

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My dear Sir,

I send you a few remarks respecting the late illness of my fillies, and beg you will make any use you like of them.

About the latter end of August last, these two yearlings, then at grass, began to look rough in their coats and dead in their skins, with watery eyes. They were much swollen under the jaws, from the bottom quite up to the ears, sometimes so much so, and so *hard*, that they could hardly eat, and with every ap-

pearance of being *all wrong*, and breeding some serious disorder, which at first I suspected to be strangles; but, as the nose did not run, nor the swelling appear to gather on any particular spot, I began to feel a little alarmed, lest it might prove to be *suppressed* strangles, having, in the preceding year, seen a case of the same in a two-year old, of a relation, which, at first, baffled all the farriers in the neighbourhood, and subsequently even the skill of the veterinary surgeon, from his being called in too late, the disorder ultimately ending in glanders.

This circumstance being fresh in my mind, and having *seen* the filly above referred to when under treatment very soon after the disorder first made its appearance, and having myself lost a thorough-bred filly with the same disorder a few years ago, and for which 100 sovereigns had been offered, together with the knowledge that Mr. Mogford was at the time out of the island, made me suspicious about the fillies, which being both by a horse of my own, I took rather more than a usual interest about.

I was very glad when I heard that Mr. Mogford was returned, and lost no time in sending for his valuable assistance. After giving my opinion that it was a case of *suppressed strangles*, Mr. Mogford immediately hinted his suspicion that they had eaten some poisonous plant. He treated them accordingly, and they are both quite well now, without any appearance of strangles during their illness. It was by the exertion of great skill and judgment that the life of one of them was saved.

A short time ago I had a valuable cow, taken ill the day after calving. On the next day to that, Mr. Mogford was requested to give me his opinion as to the case, as it had already assumed a very formidable shape. He scarcely had time to see the cow alive, for in a few minutes after his arrival she died. Mr. Mogford expressed a wish that the animal should be opened, as he thought the spine was affected, which turned out to be the case; and I do not think that any treatment could have been of the slightest use in this case.

That the colts were poisoned I have no doubt, as the meadow abounded with the crowfoot, and a ditch was full of the water-hemlock, which was all eaten by the colts. But the idea of their being poisoned at that time never entered my head; nor did Mr. Mogford know that those weeds abounded in the meadow when he pronounced them poisoned, as they were then removed into a fresh field free from the weeds.

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## THE VETERINARIAN, APRIL 1, 1841.

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Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

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THE Committee of Veterinary Surgeons is most actively employed. Its members cordially agree in every important point—they have met with support and assistance which they scarcely dared to anticipate—powerful allies have joined them from many an influential quarter, and their cause is that of science and of justice. They have received much cordial support from their brethren in the country, and particularly in enlisting many a well-thinking and influential member of either house of parliament in the support of a cause that must eventually triumph. We wish them the full success which they deserve. In the next number of our Journal we trust that we shall be able to give a full and satisfactory account of their proceedings.

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There is one undebatable ground, however, which can be pleasantly and honourably occupied,—a provision for the declining years of our poorer brethren. This subject was alluded to in the last number of THE VETERINARIAN, and a circular has been sent by the worthy Secretary *pro temp.* to every practitioner with whose address he was acquainted; but, from pressure of business, or the habit of procrastination which is sometimes the easily-besetting sin of us all, very few replies have been received.

The Provisional Committee is anxious to go to work, and, at least, to lay the foundation of an edifice devoted to the cause of philanthropy, and worthy of our profession. Our readers will excuse this hint, and comply with our wishes.

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We will leave these subjects for the present, and employ our leading article in the review of a French publication which has lately fallen into our hands.



*The State of the French Cavalry, and the Treatment of the Horse in Barracks.* By the LIEUTENANT-GENERAL MARQUIS OUDINOT.

WE have often expressed our deep feeling of the irreparable injury inflicted on the veterinary art by the obstinacy with which the late Professor Coleman opposed many species of improvement in the education of the veterinary pupil. On the cavalry service, however, and on the owners of horses generally, he conferred a benefit which cannot be too highly appreciated, and which will somewhat atone for his errors and his obstinacy in other respects. He has given a different character to the stabling of the horse, and he has banished glanders and grease from all our barracks, and from every well-conducted establishment.

It is strange that our neighbours on the other side of the channel have scarcely advanced one step in the management of the horse; but, even in those establishments which ought to be a pattern to the country to which they belong the most fearful diseases often prevail, and one-tenth of the horses of every regiment are yearly carried off by glanders. The government—the cavalry officers—we were going to add, the veterinary surgeons—have slumbered at their post. We will not, however, say that, for they have remonstrated as often and as earnestly as they dared. The plain fact, however, is, that no essential reformation in the treatment of the horse in barracks, or the construction of his habitation has taken place. A few intelligent men have occasionally remonstrated; and the Marquis Oudinot has now, much to his credit, sternly opposed himself to the crying evil.

“A plague spot,” says he, “has long rested on our cavalry establishment. That arm of war, not less difficult to maintain in its efficiency than to form at first, is placed in a situation which interferes with its very existence; and they who ought anxiously to watch over it, suffer the evil to be more and more aggravated. In proportion as the number of our cavalry is increased, the evil which destroys them acts with rapidly accumulating force. I understand,” continues he, “the nature of this plague spot; and I will no longer remain a passive spectator of the ruin of that arm of war which is the object of my devotion, and my

especial study. I will not suffer the government or others to condemn the insufficiency of our cavalry, without plainly and honestly directing them to the source of this evil, and fully exposing the incessant cause of destruction which renders it so difficult to retain our cavalry in efficiency, or rapidly to increase their numbers when the prospect or the exigencies may require it. The lodging of the troops in barracks has existed from the remotest antiquity. It was so with the Greeks and with the Romans; and many noble ruins in various parts of Italy testify their frequency and their grandeur. This system was gradually adopted by the French monarchs, and brought to considerable perfection by Louis XV. It was not, however, until the period of the revolution that the horses used to be crowded together, and their health did not materially suffer: but when, from many circumstances the number contained in the same space was increased, disease, and particularly glanders, began to appear and spread, and whole companies, and even whole regiments, were destroyed. The evil was evident enough, and it began to be ruinous to the treasury, yet no proper means were taken to arrest the destruction. Even after the revolution of July, and war threatening, 600 horses were frequently enclosed in buildings that had never before contained more than 400, and glanders began to rage with renewed violence.

“The effective cavalry force from the revolution of July until December 1836 should have consisted of 32,432 horses, out of which, allowing an average of eight years as the service of each horse, 24,384 would probably die; whereas, in point of fact, 35,931 died, or 11,553 more than were calculated upon were purchased.

“This is too clearly explained by the insalubrity of the quarters. Almost all of these buildings are faulty—the openings are not well calculated for the escape or entrance of air—and they are deficient in the height and the size of the building. Crammed for room, the horse is unable to lie down, and, consequently, cannot obtain his proper rest. The air which he breathes is too soon vitiated—its temperature is elevated to a degree beyond all proportion to that which he would inhale without; and hence it follows, that when he goes out to feed, or to drink, or for exercise, he keenly

feels the cold—the cutaneous and the pulmonary exhalation are diminished to a fearful degree, and he is often attacked by serious maladies. It is sufficiently plain that, in the cavalry barracks, not more than one-third of the horses can lie down at one time without interfering with the repose of their neighbours, and they are compelled to struggle with each other for a chance of rest. Being thus employed, there are continual contentions, and the weakest always go to the wall.

“The feeding ought always to take place in the stable, but that is altogether impossible in the little space allowed to each horse. A certain proportion of them are turned out at every feeding time, and exposed to cold and rain, or, at least, to a difference of temperature which must occasionally and not unfrequently be prejudicial. In these close stables there is constantly developed a great quantity of carbonic acid gas. It occupies the lower portion of the space, and cannot fail of being injurious to the horses that are immersed in it; and therefore they who rest, and they who long for rest, both of them suffer. The paving of these places is also exceedingly bad. It is either flat, and the urine slowly soaks into the soil, or, from its declivity, the horse is cramped and fatigued, and often materially injured.

“Of the mortality proceeding from glanders, the following is an accurate account. In a certain time the cavalry in reserve would lose 402—the cavalry of the line, 400—and the light cavalry, 323. The cavalry of reserve are heavy horses. The same number as of the others are placed in the stable, and therefore each horse has comparatively less room to lie down, and needs a greater quantity of air.

“The murderous influence of the barrack system has been experienced in the expedition to Africa. At the commencement of the campaign the horses were put into large and airy places, and glanders was almost unknown; but when barracks were prepared for them, great numbers died. In the three regiments of chasseurs—a general effective force of 1948 horses—no fewer than 427 died of glanders in one year.

“Thus, in every country, and at all times, the accumulation of horses in a narrow space has been productive of this fatal disease. Commissioners were sent to examine the construction of the sta-



bles and the state of the horse in other countries. In Great Britain, although several of the barracks had been constructed in haste, every horse had his separate rack and manger, and plenty of room for rest, and his average period of service was twelve years.

“ In the whole of Germany proper means had been employed to ameliorate the condition of the horse, and to lengthen his service.

“ In Baden, Wurtemberg, Bavaria, and Hanover, it was rare that glanders or farcy was seen; and many of the horses were 20 and 25 years old, yet fit for active service.

“ In the regiment of Light Horse in the garrison of Darmstadt not a single horse had died of farcy or glanders for eight years.

“ In Prussia the results were no less conclusive in favour of well-constructed barracks than they were in Lombardy, Sardinia, and, in fact, in almost every cavalry depôt.

“ A table of the general mortality in this regiment, and that of a regiment of French cavalry, was obtained. It is curious and valuable :—

Year.	The Hesse-Darmstadt Regiment of Light-Horse.							The French Regiment of Cavalry.						
	Effective Strength.	Contagious Diseases.	Epizootic.	Glanders.	Farcy.	Accidents, &c.	Total.	Effective Strength.	Contagious Diseases.	Epizootic.	Glanders.	Farcy.	Accidents, &c.	Total.
1831	544	3	..	..	..	..	3	600	29	..	47	7	2	85
1832	544	10	..	..	..	1	11	600	28	..	43	11	3	85
1833	544	3	..	..	..	..	3	550	12	..	50	9	..	71
1834	544	6	..	..	..	..	6	525	12	..	27	2	2	43
1835	544	8	..	..	..	2	10	525	8	..	20	1	4	33
1836	617	6	20	..	..	..	26	500	9	..	19	..	2	30
1837	617	4	..	..	..	1	5	480	13	..	18	2	4	37
1838	617	6	..	..	..	1	7	460	6	..	10	..	..	16
	4571	44	20			5	117	4210	117		234	32	17	400

This relation of actual facts is curious, and most interesting. We shall probably return to this subject at no very distant period, and hope in the mean time that the Marquis Oudinot will con-

tinue his exertions until the noble object in which he is engaged is fully accomplished. We can here forget all national jealousy or fear: we are only anxious to improve the condition and lengthen the existence of our valuable servant and companion in peace and in war.

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## THE VETERINARY ART IN CHINA.

A VERY amusing and instructive book has lately fallen in our way, written by John Tradescant Lay, Esq., naturalist in Beechey's Expedition, and author of the *Voyage of the Himmahleh*, &c.

It gives a more interesting and satisfactory account of the moral, social, and literary character of the Chinese than we have met with in any other author. It unravels the mystery which had bewildered every one respecting the wayward and contradictory proceedings of *the Tartar government*, and the wilful and purposed absurdity of almost every proceeding. It also throws a pleasing light on the character of *the Chinese people*, for which we were not prepared. We have great pleasure in recommending this work to the perusal of our readers.

Mr. Lay, however, is a naturalist and a scientific man, as well as a diplomatist. His chapter on agriculture contains some valuable observations, and the account of the surgical and medical knowledge of the Chinese will be read with pleasure as well as improvement: but the chapter on *the Veterinary Art* will be to us the most interesting, although not the most instructive portion of the work.

He says that the horses in the southern part of China are small, not remarkable for their grace or symmetry, and very ill groomed. The animal and its caparisons make a sorry appearance, and a troop of Chinese cavalry would be a very amusing spectacle. Officers in the army are occasionally seen on horseback, but civilians usually prefer the sedan, as it affords a more easy and more elegant mode of travelling.

"While," says he, "I was making some inquiries as to the state of various departments of knowledge among the Chinese, I asked a native physician if they had any works upon the veterinary art, to which he replied in the negative. Upon recollecting himself, he said the individual who had charge of the governor's horses at Canton was a friend of his, and was in the possession of something

in manuscript relating to the subject, and he thought that he could have the loan of it.

“After a few weeks,” says our author, “a book of twenty pages, sparingly covered, and inscribed in the running-hand, was given to me, and I was assured that none of the prescriptions had been copied but such as had been authenticated by the experience of the governor’s surgeon. The book was accepted with suitable acknowledgments, and laid up among many other records which I keep of the Celestial Land. When I sat down to write this short chapter, this literary ‘monument’ was taken from its hiding-place, still fresh in Chinese neatness. It begins by teaching us how to feed a buffalo. The next half dozen pages are occupied with the mention of the principal *maladies* incident to the buffalo, with a brief detail of their respective cures. The ailments of the sheep, the dog, the swine, the domestic fowl, and the duck, are specified, in connexion with their several remedies\*. The word *horse* occurs but once, and that by accident. If it is fair, therefore, to draw an inference from the production before me, this great veterinary surgeon had never tried his hand upon that noble beast over whose welfare it was his duty to watch. Thus it fares with many of the Chinese. There are, however, according to other MSS., six domesticated animals which are allowed a place upon the doctor’s list,—the horse, the ox or kine, the sheep, the domestic fowl, the dog, and the swine. The duck is introduced as a friend of chanticleer.

“My friend’s acquaintance with books was not very extensive; for, within a few days, two copies of a printed work upon the diseases of the camel, the horse, and buffalo, were brought to me by different hands; and he himself sent me an old copy of the same work some time after, which he had probably begged from a brother professor, as it contains many notes in manuscript. One volume is occupied with the history and treatment of the disorders incident to the camel, which is a strong proof that this ‘child of the desert’ was once in general use among the Chinese. Each section is accompanied by a figure, for the purpose of exhibiting to the eye the particular attitude in which the animal rests itself while suffering from the malady described in that chapter. The poor patient cannot answer a string of questions; the doctor is therefore obliged to study its behaviour,—a practice familiar with experienced practitioners of the west. The natives of the Celestial Empire, in days when the intellectual flame was trimmed from time to time, refined upon this idea, and, calling

\* Orpiment and linseed oil figure among the remedies for external disorders, as do also snake’s skin reduced to ashes and applied hot; and the fibres from the leaves of tobacco in decoction are used in the same way.



the graphic art to their assistance, enabled the dumb animal to tell its own story in picture. The illustration is followed by some account of the disease, its causes, nature, and so on; which, being founded upon erroneous conceptions of the living machine, is a curious patchwork of truth and falsehood. The pictorial representations amount to forty-eight. Twenty-nine diseases are considered incurable, and are mentioned, with their proper designations, to caution the parties concerned against a bootless expenditure of time and money. The medicines prescribed are chiefly such as are unknown in this country if we except alum for diseases of the foot, liquorice, and a few others. Some pains were taken to render the draught palatable, as the drugs are ordered to be mingled with milk, wine, honey, and other pleasant vehicles.

“Two volumes are devoted to the horse, and contain much curious if not interesting matter. I will select a few specimens in order to shew how a Chinese reasoned and acted in the treatment of a creature so useful to man as a partner in many of his labours. The state of the circulating system could not easily be overlooked by a people who affect so much delicacy in judging of the pulse, and so we find special directions as to the manner in which the three middle fingers of the right hand are to be applied along the course of the artery. That in the neck seems to have been pitched upon as the most obvious, and the most likely to tell the truth. About fifty spots were marked upon the skin of the animal, and severally distinguished by very quaint epithets, for the sake of pointing out the proper situations for applying a hot needle or bodkin: thus we observe that the Chinese were long since acquainted with the cruel but sometimes necessary practice called firing. It corresponded to the use of moxa. In man a heap of combustible matter was ignited upon his skin; in the horse a hot iron was laid upon the same part. Twenty-four spots are also designated for the sake of shewing where the surgeon ought to apply his lancet, or, as it is called, his *chisel*. The Chinese, who never had wit or courage enough to free a poor sufferer from a diseased part, seem to have had a mighty humour for torturing the healthy portions with their nine scarificators; and we see that they extended their kind regards to the horse, and doled out to him a full measure of fire and steel. They were not strangers to the use of the probang, and seem to have resorted to several methods for relieving diseases of a very decided character; we are, therefore, less surprised when we learn that they ventured so far as to insert an instrument into the eye of the horse in order to remove the opaque lens which obstructed his sight. The instrument used for couching was simply a needle with a small shaft; it was introduced into the upper part of the eyeball.

“Two kinds of cataracts are described, with two corresponding modes of operating, but somewhat obscurely, from the affected quaintness of the terms.—We cannot close these brief allusions to Chinese farriery without felicitating the horse of this country on the changes which have taken place in the general mode of treating his disorders, since his frame and œconomy became the subjects of enlightened investigation. Now, instead of the tortures which a stupid and ignorant set of leeches used to inflict upon him, kindness prepares his bed, and fair science ministers to his diseases.”

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## AN ILLUSTRATION OF THE INFLUENCE OF IODINE.

*By Mr. W. WARDLE, V.S., East Sheen.*

*3d July, 1838.*—A BLACK cart mare was received into my infirmary, with a large callous tumour around the pastern joint of the near fore leg. She had been previously treated by a smith at Fulham. There was one seton in the tumour when she arrived, but no discharge of matter; I therefore determined to pass more setons. Three were immediately inserted, and dressed with ung. tereb. until the 26th of July. No alteration in its size having taken place, a strong blister was applied, and repeated on the 3d of August.

*13th Aug.*—No diminution whatever in size; I therefore determined to try the effect of iodine.

An ointment composed of ʒx of potass. hydriod., with ʒvij of lard, was made—ʒiv was well rubbed in, and the quantity gradually increased daily until ʒxij were used: xij grs. of iodine with ʒiij of gentian were given every morning at the same time.

In seven days there was a marked improvement in my patient, the tumour being reduced nearly one-third. On the 3d of Sept. she was discharged, and recommenced her daily labour. I had frequent opportunities of seeing her, and perceived every time a further reduction in size.

*25th Oct.*—Tumour scarcely perceptible: upon examining the joint with the hand, a small portion is to be felt, but very soft.

*17th Nov.*—It has entirely disappeared, except that a slight thickening of the integument remains.

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## A CASE OF DILATATION OF THE HEART IN A MARE.

*By Mr. J. D. HARRISON, V.S., Southport.*

ON Thursday last I had an opportunity of witnessing the following case; and as it presented to me some lesions which I never met with before, its publication will, in all probability, be interesting to your readers. The subject was a cart mare, rising ten years old, and she had, from her youth upwards, been in the frequent habit of shafting very heavy loads, at which times her spirit appeared to far exceed her strength. She had, on the whole, been a very healthy and thrifty mare, having never, as I understand, been under a doctor's care. The owner had, for the last eight or ten months, perceived that she did not thrive as heretofore; but as she fed well, was always cheerful, and regularly performed her accustomed work in cart and plough, he conceived the ailment under which she laboured to be of trifling importance. On Tuesday last she was, in company with one or two others, yoked to the plough at eight o'clock in the morning, where she continued with what the owner thought more than her usual vigour until three in the afternoon; and, when taken home, took her feed, as well as the one at the stable hour when left for the night, and to all appearance in a state of perfect health. On Wednesday morning she, for the first time, refused her food. She appeared to be very weak, and the owner bled her; after which he was much afraid that she could not be got into the stable again. She became gradually weaker during the day, and, on Thursday morning, I was sent for. When I saw her she was standing, all her legs tottering under her, and apparently threatening that, every moment, they would yield up their office,—a threat which was not long before it was executed; for while feeling her pulse, she suddenly staggered forwards two or three yards, and fell; and although she made several efforts to recover the erect position, they were all ineffectual. About ten minutes after she had fallen, and when sufficient time had, as I thought, been allowed for the system to have recovered in some degree from the effects of her recent struggles, I again felt her pulse at the submaxillary artery; but it was so very small and weak, that I could not with any degree of precision count the number of the beatings. She lay in a perfectly comatose state, with her mouth wide open, her tongue protruded, and the lower lip pendulous; and almost appearing as if in a state of paralysis. Her respiration seemed, at times, suddenly to have ceased, and, to all appearance, she was actually dead. I must not omit to state that, when standing, her breathing was not



at all laborious, but shorter and quicker than natural, and the state of coma so plainly visible, with eyelids closed, head hanging, mouth open, and tongue protruded, that I was at first induced to consider it as a case of stomach-staggers. Upon my recommendation, she was destroyed, and my first peep was at the stomach and intestines, when, to my surprise, the former was almost in a state of collapse, and it, along with all the rest of the abdominal viscera, was in a perfectly healthy state. Upon removing the sternum, the heart first attracted my attention, from its immense size. The lung on the right side retained its natural pinky hue, and I was not able to detect the smallest spot of ecchymosis throughout its whole extent; and no doubt exists in my mind, that death would shortly have taken place from the effects of the disease situated in the heart, the left ventricle being in such a state of dilatation, that it almost filled the left cavity of the chest, usually occupied by the lung, but which, in this instance, had gradually become absorbed, in order to accommodate itself to the increasing size of the ventricle, and had proceeded so far, that the left lung did not exceed in size the breadth of one's hand, and that small portion was situated at the most posterior and superior part of the chest. The brain was perfectly healthy.

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## MISCELLANEOUS CASES.

*By Mr. W. Cox, of Leek.*

### THE EPIDEMIC.

THE epidemic among cows has somewhat abated here of late, and the influenza among farmers' horses is becoming more general. A farmer, who keeps four horses, has had three attacked by it. They are getting better, but the other—a mare—has, as yet, escaped. On inquiry, I found that she had the influenza in 1836. Are the horses that were diseased in 1836-37 liable to the influenza that is now prevalent? This is a curious and an interesting question. I gave at first—and I thought with very good effect—from one to three drachms of aloes to each of my patients, until I began to find that some of them were violently purged by two drachms of aloes. I can now do very well without aloes in this complaint. I am at this moment attending a horse that has been purging four days, from a dose of physic administered by a farrier.

## RUPTURE OF THE PLEURAL COVERING OF THE LUNGS.

I was sent for to examine a blood mare, that had died on the previous day. I found all the abdominal viscera healthy, and the right side of the lungs; but on the left side of the thorax there was a large quantity of blood, proceeding from a rupture of one of the lobes. There was an opening through the pleural covering, and into the parenchymatous substance, large enough for me to introduce two of my fingers.

One of the grooms had taken this mare from grass, a journey of twelve miles. He was seen riding her up a hill, at the top of her speed. He had not proceeded more than nine miles before she dropped and died.

## HÆMORRHAGE FROM THE UTERUS.

There was a false presentation of a fœtus from the vagina of a cow. One hind leg protruded. The other leg was raised, and the calf brought away. The operator, although very expert in these matters, must have injured the uterus in raising the leg, for profuse bleeding from the uterus immediately followed, and proceeded almost to syncope. The farmer talked of destroying the animal, but experience suggested the proper remedy. A considerable quantity of the black oil, as directed to be made by Mr. Morton in his *Pharmacopœia*, was introduced into the uterus by means of a sponge, and the bleeding was speedily arrested. A drink was then given, composed of Epsom salts, opium, digitalis, nitre, and a small portion of caraway powder, in tepid water. She got well without any further treatment, only the skin became very yellow, and the hair came off in patches.

## TENESMUS, AND VOIDING OF BLOOD.

A few months ago I was sent for, late at night, to a mare, apparently in a dying state. She was lying down and getting up continually—the membranes of the mouth, nose, and eyes were exceedingly pale—the pulse 100, and scarcely detectable at the jaw—she was bedewed all over with a cold perspiration—there were violent tremors, and every symptom of approaching death. She voided from the anus great quantities of a bloody fluid, and there was almost constant tenesmus.

I administered, every hour, half an ounce of spirit of nitrous æther, and the same quantity of tincture of opium, and a drachm of sulphuric acid largely diluted with water.

In a short time she began to amend. On the following morning she ate a little. I then gave her a laxative, and in a few days she was well. She had been on a journey of ten miles with a load of straw; and, on her way back, about eight miles from home, the bloody purging began to appear.

## PHARMACOLOGICAL EXPERIMENTS.

By Professors RENAULT and BOULEY, *Alfort*.

## MERCURIAL OINTMENT.

IN trying, during the past year, the effect of mercury, and its different preparations, on the horse, we have obtained a singular result, namely, that of drying up the purulent secretions. If frictions are made with mercurial ointment, to the amount of fifty or sixty drachms per day, on a horse that has a seton or suppurating wound, in the space of three or four days, varying with the constitution of the animal, the influence of the mercury is evident in the modifications which the suppurating surfaces undergo. The granulations take on a grey leaden tint, or sometimes become completely black. The pus secreted is very much diminished in quantity—it becomes more fluid, and exhales a characteristic fœtid odour somewhat resembling that from salivary abscesses. After a while, when *the mercurial intoxication* is complete, the suppuration entirely ceases, but not until long after the medicament has ceased to be employed.

We have experimented with this property of mercury on a great number of horses affected with suppurating wounds, and have constantly obtained the same results. Among others, we would refer to a horse with fistulous withers with very great suppuration. When the mercurial saturation was obtained, the wound completely dried up; farcy-cords appeared on the surface of the body, and glanders evidently declared itself.

This property of mercury being recognized, we applied it as a therapeutic agent. We often dried up chronic discharges from the nasal cavities, by the employment, during several continuous days, of frictions of mercurial ointment, varying from thirty to sixty grains.

This mercurial saturation has been demonstrated in certain animals by a very curious phenomenon. In proportion as the discharge has diminished, the expired air has become so fœtid that we could almost fancy the existence of ozena. This stench, however, disappeared soon after the cessation of the employment of the mercurial agent.

We thought that it would be curious to trace the effects of this property of mercury on horses labouring under chronic glanders. In some of them the discharge completely disappeared, but only to return some days afterwards. In other cases, glanders took on a more acute form. The chancres were enlarged, and the



discharge from the nose was not diminished. In a few instances it had no influence at all.

There needs not to be any fear of the poisonous property of the mercury on the economy of the horse in the employment of it as a therapeutic agent. It has only been by the use of 120 grains of the ointment daily for more than a month that we have been enabled to destroy the animal. These facts appear to deserve considerable attention.—*Réc. de Med. Vét.*, Sep. 1840.

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## ON THE PHYSICAL EFFECTS OF METALLIC SALTS ON THE LIVING AND DEAD TISSUES.

*By Professor LASSAIGNE, Alfort.*

THE physical effects which a great number of metallic salts produce on the living and dead tissues have been long since proved by numerous experiments, and it is on the knowledge of this that the usage of them has been established, at the present day, in medicine and surgery; whether as internal or external medicaments.

Of the chemical reactions which take place between these bodies, we are either entirely ignorant, or our supposed knowledge of them is founded more on analogies than on positive and conclusive facts; therefore it is that M. Lassaigue, Professor of Medical Chemistry and Pharmacy at the Veterinary School at Alfort, has devoted the past year to the study of this, not less interesting with reference to organic chemistry than physiology and medicine.

After a course of experiments on the albumen which exists so plentifully in all the fluids contained in the animal frame, and in the greater part of the tissues of the organs, M. Lassaigue has demonstrated, contrary to the general opinion, that all the metallic salts may become united to these organic principles, without undergoing any decomposition. He has recognized that the compounds which result possess new properties which he has described in detail in a Memoir presented to the Academy of Sciences. The characters which distinguish them permit him to explain their absorption in the economy, and their presence in the different fluids with which they have been brought into contact during life. The elements of these compounds appear to be united in definite proportions, as are observed in the combination of inorganic bodies or minerals.

From the various experiments, the processes of which he describes, he deduces the following conclusions:—

1. In the contact of a metallic salt, having as its base the oxides of iron, copper, lead, zinc, mercury, silver, &c., with an albuminous or serous fluid a combination is established between the albumen which these fluids contain and the metallic salt.

2. The compound may, agreeably to the relation of the salt with it, be insoluble or soluble in water.

3. The insolubility of these combinations explains the desiccative property which certain pharmaceutical preparations possess, in the composition of which salts of lead or of zinc enter.

4. In the employment of astringent medicines, and in the destruction of the tissues by the potential cautery, there is equally a combination between the tissues and the salts which are brought into contact with them: a combination which forms part of the scar, which is afterwards separated from the living tissue.

The same Professor, who neglects no occasion of submitting to chemical analysis the different pathological products which the animals that die in the school at Alfort present, has examined, at the request of the Professor of Anatomy, the kidney of a horse that was completely ossified. It offered, on chemical analysis, water in combination 73, the renal tissue 18, and phosphate of lime 1.80. In a sound kidney the proportion of water was increased to 79, and that of the renal tissue to 20. Consequently, in the pathological product under examination there was an addition of 8 or 9 per cent. of calcareous salts, which formed the base of the osseous tissue.

*Rec. de Méd. Vét. Sept. 1840.*

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#### A CASE OF COMPLETE OSSIFICATION OF THE RIGHT AURICLE IN A HORSE COMPLICATED WITH HYPERTROPHY OF THE HEART.

*By M. G. BARTHÉLEMY.*

THE maladies of the heart, so frequent and so well known in the human being, are seldom observed, or at least have scarcely been studied, in our domesticated animals; in consequence of this, our veterinary works contain only cases of these diseases few and far between. The following possesses peculiar value and interest.

The horse that is the subject of this memoir, was five or six years old, small in stature, weakly in appearance, but doomed to work in a public carriage. He laboured in this service only about five months, for he was found to be incapable of the

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labour required of him. Although he had not any cough, it had been remarked that his respiration and his pulse were much quicker than in their natural state, and that the slightest exercise was sufficient to put him out of breath; yet, even then, the movements of the flanks were increased in number rather than rendered irregular.

Hoping that he would gradually improve, and reckoning upon the youth of the horse, M. Barthélemy, the veterinary surgeon of the establishment, advised that he should be sent to a farm in the neighbourhood of Paris, to which the convalescents were generally despatched. He remained there two months, and came back as nearly as possible in the same state. The season then admitting it, the effect of green food was tried, but without success.

At length, after various fruitless efforts to restore him to health, he was sent once more to work. This did not at all succeed; and the animal, that before this time had only appeared to be somewhat indisposed, rapidly became seriously ill. He was sent to the infirmary, and died there on the sixth day, with symptoms of pneumonia on both sides of the chest.

On opening him, some hours after death, M. Barthélemy found both lungs occupied by vast cavities or vomicæ, with their parietes smooth and well organized, and containing a white, homogeneous, and inodorous pus. The greater part of the pulmonary tissue was hepatized, of a firm consistence, and grey colour. There was no effusion in the thoracic cavity, and there was no adhesion of the pleura. The pulmonary lesions, however, were quite sufficient to account for the death of the animal.

Pursuing his necroscopic observations, M. Barthélemy remarked that the heart, exceedingly voluminous, filled nearly the whole of the cavity of the pericardium. The left auricle was entirely ossified, and strongly adhered to the pericardium by white, fibrous, and tenacious bands. This auricle was double its natural size, and its walls completely ossified, and more than the third of an inch in thickness. The auricular septum was sound, and the auriculo-ventricular valves had not a spot of ossification. It was the same in the aortic trunk and its divisions. The hypertrophy of the heart was caused chiefly by the thickness of its parietes. The ventricular cavities were not sensibly enlarged.

It is easy to perceive, from this short description, that the ossification was carried to such a degree, that the right auricle was no longer able to contract. Deprived of the impulse which this auricle was wont to impress upon it, the blood penetrated into the ventricular cavity by its own weight, and more particularly by a kind of suction which always takes place at the moment



that the ventricles dilate. It was thus, at least, that the circulation was kept up in this animal. It is much to be regretted that this organic lesion had not been suspected during the life of the patient, and that auscultation had not been resorted to. It may be presumed that this mode of exploration would have detected certain peculiar symptoms which might have thrown some light on the semeiology of these affections in the horse.

The peculiar difficulty of breathing which this animal evinced, did it depend on the chronic affection of the lungs or the organic lesion of the heart, or is it to be attributed to the joint influence of both? Which of these affections is developed first? It is difficult or impossible to resolve questions otherwise of little importance. We will content ourselves with saying that we are disposed to believe that the affection of the heart preceded that of the lungs, and even contributed to the development of it. The complete ossification of the auricle, and especially the thickness which its walls had acquired, would authorise us in concluding this to be the case.

This specimen, the most complete of its kind that veterinary medicine possesses, is so much the more remarkable as being procured from a horse between five and six years old, a time of life when these ossifications are not frequent.

Diseases of the heart are rare in our domestic animals. The venerable Girard, so long a time professor of anatomy at Alfort, and M. Rigot, his worthy successor, never met with more than one case similar to that we have described, amidst the numerous animals that were destroyed under their inspection in the space of forty years.

Hurtrel d'Arboval makes no mention of the diseases of the heart in the first edition of his work, and very slightly mentions them in the second edition, candidly confessing that he is unable to present a satisfactory history of them. Messrs. Renault, Barthélemy, sen., and Riquet, have since recorded some bony affections of this all-important organ, but we have yet much to learn on this subject.

*Réc. de Méd. Vét., Sept. 1840.*

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THE FOLLOWING GENTLEMEN OBTAINED THEIR DIPLOMAS  
AT THE EXAMINATION WHICH TOOK PLACE ON

*March 17th, 1841.*

- Mr. William Wardle, Mortlake, Surrey.  
— Charles Morgan, Ross, Hereford.  
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THE  
VETERINARIAN.

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VOL. XIV, No. 161.]

MAY 1841.

[New Series, No. 101.]

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OBSERVATIONS ON THE PRESENT EPIZOOTIC  
AMONG HORSES.

*By Mr. HUGH FERGUSON, V.S., Lecturer on Zootomy, Zoonpathology, and the Principles and Practice of Veterinary Surgery.*

ONE of the greatest difficulties with which the practitioner of veterinary medicine has to contend, is the treatment of that class of diseases termed "epizootical," from their attacking a number of animals about the same time, each being the prevailing disease of the season in which it makes its appearance. In no other instance is the superiority of the well-educated veterinary surgeon over the mere empiric, whose merit rests on experience alone, better exemplified than in the manner in which this description of malady is treated by each. Here the skill of the empiric generally falls far short of the great expectations that have been raised by his "extensive experience," and long catalogue of former "cures." Unfortunately for his reputation, and the pockets of those proprietors of animals requiring his aid, the disease, although so intense in its character, so rapid in its course, and so fatal in its termination, is yet generally so transitory in its sojourn, that it is but the affair of a single season; and, therefore, remains not a sufficient length of time to enable him to profit by that description of experience, which is the only principle by which he was ever guided in the practice of his art. It is only when the disease has almost entirely disappeared, when such knowledge is no longer of any practical utility, that he commences to understand any thing about its peculiarities. Dearly bought is such experience! Not only have all his endeavours proved ineffectual towards assisting nature to contend against the disease, but, by the exhibition of improper remedies, he has



been the cause of death to the majority of his patients; where, in many cases, were Nature left to herself, her powers would have triumphed, and the animals recovered. The former has, however, been far too frequent during the preceding three months. Few could have even a remote idea of the numbers of horses that have in so short a time fallen victims to super-purgation alone, from an injudicious exhibition of aloes, when the mucous membrane, from the peculiar derangement of its function, was unfit to bear the action of so acrid a purgative.

How different is the scene with the veterinary practitioner, who has had the advantage of a medical education based on scientific principles! To him the disease, although new, is by no means incomprehensible. With a mind peculiarly fitted for the purpose by previous education, he is able to detect, and attribute to their proper source, each of the long and tortuous train of varied symptoms which usually accompany such complicated disorders of the animal system. He also duly appreciates, and turns to advantage in deciding upon a mode of treatment, the seeming paradox of certain medical agents having effects on the animal economy so contrary to those which they are daily observed to produce, where the leading symptoms are to the superficial observer apparently the same, inducing him to believe that the causes by which they are produced must, therefore, be identical.

The prevalence of a disease which has for some months past been raging among the horses of this country, and the great number of fatal cases that have come under my own immediate observation, from an injudicious mode of treatment resulting from the true pathology of the affection not being sufficiently well understood, induce me to comply with the wishes of some of my medical friends, by presenting to the profession, in a condensed form, some observations on this novel, and doubtlessly, to some, very interesting, subject. I am the further induced towards a compliance, by the fact of its being an affection requiring but the simplest treatment for its alleviation and cure, instead of being, as it has been generally represented, a disease most virulent in its character and most fatal in its termination.

Previous, however, to entering into the subject, I wish it to be perfectly understood, that the observations contained in this memoir treat merely on the present epizootic among horses alone, and do not extend to those of any preceding period. Neither let it be imagined that they will for a certainty be applicable to every change and variety which the disease may assume throughout the remainder of the season; all epidemical and epizootic disorders being liable to assume so many varia-

tions from atmospheric and other fortuitous changes, that it would be quite impossible to have even a remote idea of their novel peculiarities.

The disease to which I purpose devoting the present observations has received many appellations. By some it is called "distemper," by others "the influenza," while by the generality of medical men it is designated "the epidemic," although very improperly, the word implying a disease among the human species. I therefore, in conformity with the generally adopted principles of medical nomenclature, propose calling the malady in question the EQUINE EPIZOOTIC (from *epi*, upon, and *zōon*, an animal); adding equine, to distinguish it from those affections which are at present reigning among our other domestic animals.

It attacks indiscriminately horses of every description and age: the old, the young, the high bred, the low bred, the strong, the weak; under every circumstance, and in every situation; whether in the well-regulated stable or in the open field.

*Is it either infectious or contagious?*—With respect to this question there are conflicting opinions. Repeated experiment, and extensive observation, have convinced me that it is neither. The fact of its running with rapidity through different stables and localities is no proof of either its infectious or contagious character. The existing cause appears to rest in atmospheric influence, to which all are alike exposed. It requires but a certain degree of susceptibility in the animal to germinate the disease, which susceptibility depends in a great measure on predisposing causes. To these all animals in the same dwelling are alike exposed, which fact accounts for the development of the disease among such great numbers in the same locality, and about the same period of time.

*Pathology.*—Derangement of the organic system of nerves, the mucous membranes in general becoming affected; but more particularly those of the eye, the naso-pharyngeal opening, and alimentary canal; those of the respiratory passages, the Schneiderian membrane excepted, participating in but a very trifling degree; sometimes accompanied with an œdematous condition of the subcutaneous cellular tissue, particularly that situated in the eyelids, prepuce, sublingual region, posterior extremities, and lips; its presence generally occurring in the order in which the parts are stated; the skin participating markedly in the general derangement; the glandular system sometimes sympathising.

Doubtless there are many to whom the idea of the organic system of nerves being affected will appear far too hypothetical to be at all tenable by reasonable induction. To such persons I

would say, let them give the position some reflection before they entirely condemn it. There can be little doubt that the existence of almost all epidemical and epizootic diseases is attributable to a peculiar state of the common medium by which we are surrounded. There is a certain peculiarity in the atmosphere of which we cannot take cognizance, excepting through the medium of the marked effects which it produces on the animal economy. The question then arises—How does it produce those effects? Is it by coming merely in actual contact with the particular part affected? Or is it through the medium of respiration that the vital stream becomes impregnated, and thus disseminates the morbid principle throughout the entire system, to exert its influence on those parts on which it seems to have its specific action? Surely such a theory is by no means untenable, especially when we take into consideration that there are many tangible forms of poison, which, no matter however introduced into the system, invariably produce the same specific effect when destructive to life: thus arsenic, when applied with fatal effect even to the external surface alone, will cause inflammation and ulceration of the stomach; and tartar emetic, when injected into the vascular system, produces exactly the same effect as when taken into the stomach—violent vomition. There are, however, many pathological facts, which completely set aside the probability of the parts affected with epidemic disease having become so merely by their contact with the miasma floating in the atmosphere. While on the continent, I had an opportunity of investigating a disease of the spleen which raged as an epizootic among the bovine cattle throughout the whole of the south of Europe for a considerable time. Sudden in its attack, rapid in its course, and generally fatal in its termination, it was the means of causing an incredible scarcity of ox meat for a long period throughout every district that it visited. Here it must be admitted the theory of actual contact falls to the ground. These facts, and a number of phenomena which present themselves consequent on the mode of treatment that has been usually adopted, induce me to come to the conclusion that the seat of diseased action in the present equine epizootic rests in a derangement of function in the organic system of nerves, more particularly that portion of them which influences the action of the mucous surfaces. Whether this derangement of the organic system be primary, as the seat of the disease, or secondary, as the effects of sympathetic action, there are no means of exactly determining; the elucidation of disease being a matter that admits of but little theorising. Yet it must be borne in mind, that, whether primary or secondary, it is frequently so intense, as, by a species of reflex action on



the cerebro-spinal system, to cause such a rapid prostration of strength and semicomatose state, that the tottering, half paralytic gait met with under such circumstances has induced many to imagine that either the spine or kidneys were the parts first affected.

*Symptoms.*—The precursory symptoms vary much in this disease, and are generally so obscure as not to attract any notice. Until a few hours previous to its making its appearance, there is no alteration which would lead to any suspicion of the threatening evil. Sometimes, though by no means invariably, there is a sudden loss of appetite, yet the animal may drink with avidity. He is, however, in the majority of instances dull and listless, with a dejected countenance; moping his head in the manger, as if he were half asleep. The surface of the body and extremities, when at all altered in temperature, are more frequently found rather warmer than usual. This stage is, however, preceded by a rigor or cold fit; yet there are some cases where the coat is found staring, and harsh to the feel, from a corrugated state of the integument resulting from depression of temperature. The eyes becoming attacked is, in most instances, what determines in the mind of the attendant that there is something really the matter. Many at first attribute this symptom to the effect of a blow, or some other accidental circumstance. One, sometimes both, are remarked to have an increased secretion. The pupil of the affected eye has, ere this, become contracted. Before the lapse of many hours, in many instances before the lapse of one, the eyelids become completely closed from irritation and tumefaction. Their margins become everted, presenting to the view the conjunctival membrane highly inflamed, of a reddish colour tinged with yellow. Inspissated mucus, often muco-purulent matter, collects and adheres to the inner canthus. Mouth hot, but by no means parched; usually containing a quantity of “soapy slaver.” There is generally a peculiar appearance of the buccal membrane covering the gums, lining the lips, and beneath the tongue, denoting extensive derangement of the gastro-intestinal mucous surface. There is not alone an alteration of colour, but also a marked increase of vascularity. The capillary vessels of those parts which, in the healthy state of the animal, carry only colourless blood, have now their courses well delineated by their extreme turgescence. The nasal membrane is frequently scarlet. In short, in this stage of the disease there is erythema of all the mucous membranes participating in the affection, an increase of their secretion, and a tendency to slight infiltration of their subjacent cellular tissue. In some of those cases, where the disease appears to be much more intense than usual, slight abrasions

are sometimes observable on the Schneiderian membrane of the septum, and also on the buccal membrane of the mouth. In others the nasal membrane presents a number of scarlet streaks resembling those seen in the mildest forms of scarlatina. The discharge from the nose, when any is present, is, however, but seldom of a decidedly purulent character, although that from the eyes is frequently so. The sublingual region, when felt, may sometimes be observed to be slightly tumid. The manner in which the integuments and subcutaneous cellular tissue are affected, however, varies much in different individuals. Sometimes the entire surface of the body is covered with a rash, resembling hives, or what is commonly called "*flying surfeit*:" at others there is a general anasarca; but more usually the œdema is confined to the legs, which are often so sore and tumid, that in some instances the animal can scarcely move without considerable pain, and is yet suffering so much from irritation that he cannot remain for any length of time without shifting or varying his position. Many instances are met with where the skin has become much glossier than usual; while in others, as I have already mentioned, it is so tightly drawn over the body as to render it impossible to pinch it up from the surface; or, in common parlance, the animal is "hide-bound."

With respect to the pulse, its character varies much in different individuals labouring under this affection; depending in a great measure on the natural irritability of the patient, the extent to which the disease has influenced the system, and the varieties of its complications, from organs having, previously to the attack, been rendered susceptible to participate in its consequent derangement by the existence of chronic disease, or impairment of function resulting from an antecedent malady—as in cases of pulmonary, hepatic, renal, or other visceral affections of long standing. Under such circumstances, in addition to the accelerated pulse, there are also present the other symptoms peculiar to idiopathic diseases of these organs. These extensive additions to the derangement of the animal system, produced by the peculiar action established in it by the presence of epizootical disease, ought not, however, to be confounded with the pathological history of that affection, but be considered in their true light of being merely accidental complications, and not true varieties of the disease itself. In most instances, however, there is an acceleration of the pulse. It ranges from about forty to eighty; in some cases strong, in others weak. In fact, there is nothing varies more than the state of the pulse, even among a number of cases where all the other symptoms bear a close resemblance in each. I have lately met with several instances where, after the

first stage, the pulse sank considerably below the usual standard. The febrile symptoms are often found very intermittent.

The respiration is sometimes found hurried, but in the majority of cases perfectly tranquil. It is frequently greatly accelerated without auscultation being able to detect any peculiar alteration of sound beyond that of an increased intensity of the respiratory murmur. In two of some cases where stertorous breathing was present, and where the animals, being comparatively valueless, were purchased for experiment, on examination after they had been destroyed for that purpose, there were found no alterations sufficiently great in the appearances of the lungs, their investing tunics, or the air passages leading to them, to satisfactorily account for the great derangement of the apparatus during the lifetime of the animals. Here it would appear that the respiratory system was merely increased in action from the effects of nervous sympathy, and not suffering from abnormal lesion. Cough is seldom present, excepting where it has existed previously, or that the affection has extended to the lining membrane of the larynx or bronchia.

One of the most leading characteristics of the disease is the rapid prostration of strength, particularly in the hinder extremities.

*Treatment.*—It seems to be a law in the animal economy, that the action of an organ or set of organs cannot be increased without that of others being proportionally diminished. This appears to extend even to the grand divisions of the nervous system. Where there is an increased action going on in the organic nerves or “system of the sympathetic,” with which the mucous membranes are so plentifully supplied, there is always present, as a consequence, a proportionate degree of debility in the motor system, producing that intense prostration of strength always observed in extensive epidemical affections of the mucous membranes, which may be regarded more as an effect of constitutional derangement, resulting from some unknown influence, than any specific or idiopathic disease of the tissue itself. The contrary is observed to take place where there is a morbid increase of action in the motor system, or those nerves supplying the muscles of volition. Tetanus offers a most striking and familiar example. Here there is such an increase of irritability of the inferior (anterior in man) spinal columns, that all the muscles of volition are thrown into intense and permanent action. The organic system, however, becomes greatly debilitated, loses in a measure its influence; and, as a result, there is such a torpid state of the digestive organs, that in many cases the most drastic medicines fail to produce the slightest effect on the intestinal mucous membrane.



These facts throw considerable light on the peculiarity of treatment required to be had recourse to in the present epizootic among horses. It is evidently a febrile affection, exerting its influence principally on the organic system of nerves, through the medium of which it affects the mucous and tegumental membranes generally; more particularly those that have been already rendered peculiarly predisposed by chronic disease or some peculiar idiosyncrasy of the individual. In confirmation of this assertion, it may be adduced, that, when there is a disposition to ophthalmia, the affection of the eyes is sure to be more intense, particularly in the one before affected; and where there is a tendency to diarrhœa, the mucous membrane of the intestines suffers more than any other part of the animal; also, that, in cases of chronic bronchial irritation, the respiratory system suffers much more considerably than under any other circumstances.

We must entirely discard the idea of its being merely a simple idiopathic inflammatory affection of one or more of the mucous membranes, with fever occasionally, as an accidental attendant. The results of treatment, suggested by such an idea, have proved its erroneousness beyond doubt. By bleeding, you only diminish the already far too weakened forces of the animal, without at all striking at the root of the evil. Give the ordinary dose of aloes, and you produce super-purgation. The bronchial membrane also sympathises, and you thus establish what is a thousand fold more difficult to contend with than the original disease; which will, like all epizootical diseases, when once set in, run its prescribed course: but from the peculiar mildness of the present affection, will, if there be no accidental complication, in the majority of instances terminate by resolution. However, at most, all we can do in the present instance is to assist nature through her operations; and fortunately we shall find it a matter of no great difficulty. By some, the exhibition of diffusive stimulants is prescribed. They are, however, by no means desirable, excepting in peculiar cases, as they only tend to increase the febrile action, without reducing the disease. Some agent is required, the action of which will have the effect of allaying the increased irritability of the organic system; and thus, by striking at the fountain head of diseased action, remove those derangements of function which, although, properly speaking, are merely secondary effects, are by many considered as the primary seat of the disease. For this purpose, I have had recourse, and with the happiest effects, to the potassio-tartrate of antimony; a medicine which possesses the valuable qualities of acting on the mucous tissues, not alone by mere contact, but more particularly through the medium of the nerves, by becoming absorbed into the system, and thus act-

ing on their centres. It also has the effect of allaying increased arterial action. When given repeatedly, it acts as an aperient ; and where the bronchial mucous membrane is threatened, or has already become implicated, there is no remedy better calculated to avert the danger. In the treatment of the present disease, it is a great desideratum that its action is not *direct* upon the mucous surface, but *indirect* through the medium of the nerves and vessels by which that tissue is supplied.

In some cases I have combined this medicine, and I have thought advantageously, with a little of the nitrate of potass ; the dose of the tartrate being ʒiiss, and that of the nitrate ʒij, given morning and evening, dissolved in a little water. By giving them in water, their action is almost immediate. The moment the animal swallows the fluid, it passes at once into his capacious cæcum, very little of it remaining in his stomach. If a ball be given instead, it may remain hours in the stomach before it becomes dissolved, solution being very tardy in that organ, while there is any general derangement. The tartarized antimony, when given in its solid state, is very liable to inflame the previously irritable villous coat. The horse is, however, a most admirable subject for the exhibition of such an agent, he being an animal to whom the power of vomition is denied. Nausea can, therefore, in his case be carried almost to any extent.

When an animal is first observed to become affected, it is desirable to place him in a large box-stall, allowing him to have as much air as possible, both throughout the day and during the night. Of air, no matter how cool the temperature, *he cannot possibly have too much*. This is an axiom that should never be forgotten by the veterinary practitioner. The animal should, however, be well clothed, and the legs bandaged, but not too tightly, with flannel. These means have a tendency to equalize the circulation, particularly where there is a diminution of heat. Let one of the principal objects be, to allow the patient to respire pure cold air, at the same time keeping the surface of the body moderately warm, if the season be at all inclement.

I am well aware that there are a number of veterinary practitioners, and some having pretensions to eminence, whose treatment consists in copious bleeding, blistering the throat and sides, and then turning their patients out into a field or paddock, disregardless of the weather, there to live or die as chance may decree. To any person of common sense at all acquainted with medical matters, such a mode of treatment must appear in its true light—a lamentable example of the bigoted ignorance which still remains among many members of the veterinary profession. Such was the system of the celebrated Professor Coleman, of the



London Veterinary College, who, until the latest period of his existence, stubbornly adhered to his favourite theory, "that under no circumstances whatever could the application of cold prove otherwise than salutary to an animal." I regret that there are too many of his pupils staunch supporters of this fallacious doctrine. Would that all such practitioners, who are so unfortunate as to become affected with the present epidemical influenza, could be bled, blistered, bolused, and then turned in a state of nudity into an open field for the "*sedative influence of the super-incumbent atmosphere*," to accomplish the remainder of what was so well begun. It would be but a just judgment for the cruelty they have so unmercifully inflicted on their dumb though highly sensitive patient, the poor suffering horse. The principle of treatment is quite as applicable in one case as in the other.

In matters of medicine and surgery, flagrant ignorance, although a highly plausible defence for the infliction of unnecessary suffering by mal-treatment, yet does not, in the slightest degree, extenuate the culpability of the practitioner. If incapable of profiting by the observations of others and his own experience, he is unfit, either from the stupidity of his mind or want of education, to exercise the practice of a profession requiring inductive reasoning for its elucidation. Such an individual may, perhaps, successfully follow his vocation as a profitable *trade*, but can never, by any possibility, advance it as a scientific profession.

To return, however, to the treatment of the disease at present under consideration. Fomentations with warm water will be found useful in abating the inflammatory action of the eyes, throat, and legs. If there be much cutaneous irritability, or soreness of the latter, a decoction of poppy-heads may be used with advantage.

*State of the Bowels.*—One of the most important features of this disease is the morbid susceptibility of the mucous membranes to be intensely acted upon by the exhibition of what in other cases would be found merely a mild laxative. Here the action of the purgative is not confined in its effects to the digestive tube alone, but unfortunately extends its injurious influence to the respiratory system; the mucous membranes of which—already too susceptible—immediately on purgation setting in, sympathise with those of the intestines, and there is, then, pneumo-bronchitis in addition to the former affection, a dreadful complication, which under such circumstances generally proves fatal, the vital forces being already too far gone to enable the patient to withstand the attack, even with the assistance of the most consummate medical aid. Such a case is rendered still more hopeless if bleeding has been already had recourse to, in combination with



the exhibition of aloes, the purgative usually prescribed on such occasions. Instead, however, of there being such a costive state of the bowels as to indicate the necessity of aperients, it will be found that, after the first stage of the attack, they are generally rather lax than otherwise. In cases, however, where they do not become spontaneously relaxed, but the costiveness is considerable, a few enemata of warm water may be thrown up, which will rarely fail in producing the desired effect.

*Counter-irritation* will never be found necessary in the simple form of the disease, without some accidental complication, excepting in those instances where there is sore throat present. In such cases the part may be rubbed with a little camphorated soap liniment. Where counter-irritation becomes necessary, as in the complications of pneumonia, pleurisy, or enteritis, the means cannot be too energetic. The application of mustard well rubbed on the surface—the part being first closely clipped or shaved—is a most effectual mode of procedure, where an almost instantaneous effect is desirable.

*Regimen.*—With respect to the diet of horses labouring under the present disease, the lower they can be kept the better. They should have nothing to eat for the first twenty-four hours. If inclined to take any thing, they will find quite sufficient by searching among the straw of their beds. Until the disease has entirely subsided, hay should be kept from them entirely, and nothing allowed excepting a very small quantity of scalded bran, which should be well cooled previous to being given. The silicious particles of the bran act as a mechanical irritant on the mucous coats of the stomach and intestines, the consequence of which is a considerable increase of their secretion, an aperient effect being the result. It may startle many when I assert that starvation will be found one of the most useful agents in the reduction of inflammatory action in the horse. Yet it is an incontrovertible fact. No medicine can compete with it.

*Accidental Complications.*—If, previous to the animal being attacked, any of his organs have been suffering from chronic disease, the appearance of the new morbid action in his system is almost certain to aggravate the pre-existing evil, by establishing acute inflammatory action in those parts which were before affected. Or, in case there exists any constitutional tendency in a particular tissue to take on inflammation, it will most probably participate in the derangement. Thus are frequently found, as accidental additions, coryza, laryngitis, bronchitis, pneumonia, pleuritis, hepatitis, enteritis, and, in fact, inflammation of every organ and membrane throughout the entire frame. Their occurrence has been the source of much confusion by many veterina-

rians of limited observation seizing on them as essential characteristics of the disease. Bronchitis is certainly the most frequent. The practitioner ought, however, to make his diagnosis with extreme care, and not let the merely accelerated respiration determine in his mind the necessity of abstracting blood. There are frequently cases where, although the state of the respiration may be alarming, the pulse is not sufficiently deranged to indicate bleeding. No rule, however, can be laid down that will not admit of many exceptions. Where complications occur requiring the abstraction of blood, the symptoms almost invariably indicate its necessity. Those organs and tissues accidentally implicated will of course require the peculiar treatment necessary for each when suffering under idiopathic derangement, excepting that some modification will generally be found necessary, according to existing circumstances. It would be as absurd to say, "Do not bleed under any circumstances," as it would be to advise it in every case indiscriminately. It must not, however, be forgotten that the disease under consideration, which repeated and comparative experiment has proved, will not alone recover without the use of the lancet, but also will recover in a much shorter space of time than when blood has been abstracted. I have already had three hundred and seventy-three cases of this affection, all of which recovered. In the majority of instances the duration of the disease is from four to seven days. Many will recover without the assistance of any medical aid, requiring but to be placed in an airy situation, and have their diet duly restricted.

*Consequences and secondary Symptoms.*—Frequently, after the acute attack is past, there remain derangements of function which shortly assume a decidedly chronic character; such as nasal flux, with tumefaction and soreness of the submaxillary lymphatic glands; an ophthalmic affection, where there is inflammation, opacity, and sometimes even ulceration of the transparent cornea, with effusion of lymph or blood into the anterior chambers of the eye, the latter being but very tardily acted on by the absorbents; œdema of the legs; chronic bronchitis, &c. Sometimes the animal is in a state of apparent convalescence, when suddenly one or more of the legs become affected with a species of erysipelatous inflammation, giving such intense pain, that the affected limb cannot be put to the ground for the purpose of assisting even in the support of the body, much less in progression. These, and many other affections, too numerous for detail, are frequently found to evince themselves after the original disease has run its course. The animal being now, generally speaking, comparatively recovered of the primary disorder, they may, with few exceptions, be treated in the ordinary manner. In such

cases, either mild aperients, tonics, or venesection, as the symptoms may indicate, will no longer be found injurious—the morbid action having now, in some measure, become localized.

Veterinary Institution, Denzille Street,  
(Merrion Square.)

## ON THE SAME SUBJECT.

*By the late Mr. E. PRICE, of Cork.*

[Mr. Price was responding to our call respecting the character and treatment of the epidemic among horses in the sister island, when he was attacked by serious illness, under which, in a short time, he sunk. He requested that his unfinished Essay should be sent to the Editor. On his dying bed he thought of the welfare of his profession. It is inserted with all its little peculiarities, characteristic of the writer. *Requiescat in pace!*]

THERE has lately been in our neighbourhood an epidemic among horses, very similar to that which I witnessed in England in 1835-6, and about which so much was said and written, that I fear I shall have to relate very little new about it.

There has been in almost every case a great tendency to debility, and particularly there has been effusion into the cavity of the chest, and congestion of the lungs. I should observe, that the weather has been exceedingly variable during the continuance of the disease. The horse is off his feed, and very weak, and the breathing excessively oppressed—distressingly so on the slightest exertion. The pulse, in many instances, not more than 25, and very feeble. In other cases, however, it has risen to 60, but has been weak and intermittent. The extremities are mostly warm. When the patients have been neglected during the first five or six days, they have generally died of water in the chest; and if they have been bled or purged to any considerable extent at the outset, they have usually perished.

I have found the following treatment very successful. I commence by giving a drench composed of from eight to sixteen ounces of linseed oil, according to the state of the bowels, with an ounce of spirit of nitrous ether, half an ounce of oil of juniper, and, as it is a cheap commodity in this country, from one to two ounces of old whisky. The external applications are liniments of turpentine and caustic ammonia in equal parts. Sometimes I have added to this a proportion of oil, but there is little danger of producing blemish or vesication.



If, after two or three applications, considerable counter-irritation is not set up, I make three or four firing-irons red hot, and lightly apply the backs of them down every second rib on either side, continuing the liniment every four or five hours. Should a swelling or ridge appear where the iron has passed, it may be regarded as a favourable symptom. The breathing will be speedily relieved, and the patient will recover, but there will frequently remain a loud hollow cough for a considerable time.

After the first drink I have usually administered ounce doses of the spirit of nitrous ether and whisky, and balls of carbonate of ammonia, ginger, and Venice turpentine. By means of these, together with the absorption of the turpentine from the external applications, the kidneys are well acted upon, which I always consider to be good. The farmer's horse generally gets through the disease much better than the pampered one. The patient is generally from three weeks to a month before he gets fairly round, and if he dies, it is about seven or eight days from the first attack.

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## ON THE EPIDEMIC AMONG CATTLE.

[From the "Irishman."]

HAVING had communication from different quarters on the subject of the epidemic which at present prevails to such an alarming extent among the cattle in the city and neighbourhood of Dublin, and which is likely to spread into the country—and in the remote and distant parts, the owners of cattle not having the same opportunities or facilities of obtaining the best advice and medical treatment—I think it would be of much importance that the nature and effects of the disease, and the best modes of treating it, should be as speedily and widely diffused as possible. In order to obtain this object, communication should take place between those who have observed the operation of the disease, tried the several remedies that have been recommended and applied, and observed their effects upon different cattle; such persons would be competent to form an opinion which might guide the inexperienced, save such from the inflictions of the cow-leech, and prevent that unnecessary alarm which generally accompanies the first indications of the disease. It would be well if really skilful and experienced persons should, through the public press, submit the result of their experience to the country without delay. I know the press will do its duty in every case where the interests of the community are at stake, and spread any

information that may be submitted on the subject through the country without loss of time.

From what I have seen and heard of the distemper and its symptoms, I have a strong impression that it is neither more nor less than the epidemic murrain which devastated Europe from the beginning to the middle of the eighteenth century, and which has shewn itself since at different periods, but in a more gentle and mitigated form. During the last fortnight I have had considerable experience and practice in the matter; for in four days every cow, heifer, and calf in my establishments was attacked; but I am happy to say, that now, at the end of twelve days from the first attack (with the exception of two who are fast recovering), they are all quite well. The first attacks and symptoms were very similar. A few weeks ago the cows were all coughing more or less, which I attributed to a change of house and air, but which I have since found was a precursor of the disease. Had they been bled and purged at the time, I have no doubt they would have escaped, or the final attack been mitigated. The next symptoms were loss of appetite and of milk; a discharge of saliva from the mouth or nostrils, or both; swelling and great heat of the tongue, throat, palate, and internal parts of the mouth; a strong disinclination to move, and, when stirred, stiffness of the limbs, and great tenderness of the feet. These symptoms are accompanied by a hard inflammatory pulse, shivering, and, in many cases, high fever, and constipation of the bowels.

Fortunately, the disease points out the obvious remedies—bleeding and purgatives; and these I have resorted to with marked success. My uniform mode of treatment, and that which I would strongly recommend, was, when the first symptoms appeared, I bled from the neck four or five quarts, until the pulse was affected; and afterwards gave a saline purge, composed of a pint and a half of train or linseed oil, and from four to eight ounces of Epsom salts dissolved in hot water and added to the oil. If the bowels are obstinate, I repeat the dose in thirty-four hours; but in the mean time injections of warm water and salt ought to be given. The action of the bowels must be kept up by mild purgatives, and with proper care and attention to regimen the cure will be perfect. If any blisters or ulcers appear on the tongue, mouth, nose, udder, teats, or cracks between the hoofs or heels, three times a day apply diluted sulphate of copper (blue vitriol)—say, an ounce to about a quart of water; and, in all cases, diluted chloride of lime must be largely used, not only in washing the infected parts, but also in sprinkling the stalls and other parts of the cow-house. Unless this be paid attention to when the disorder is prevalent, and the strictest cleanliness observed, there will be an intolerably of-

fensive smell, the disorder will be prolonged among the sufferers, and the danger of spreading considerably augmented. That it is contagious there can be no doubt—my cattle all became infected in the order in which they stood. The infected animals ought to get a dry clean bed, be covered, and at least twice in the day curried and brushed all over, and the legs well rubbed. Let no dirt nor wet remain under the feet, otherwise the ulcers will be tedious in healing. Every species of filth and dirt should to be removed from the cow-house twice in the day, the stalls cleaned and washed out, and sprinkled with chloride of lime.

Attention to the food is an important part of the cure, besides restoring the animal to its former condition. The disease is peculiarly malignant in prostrating the strength and condition of the animal; three days will do more injury to the constitution of the beast than as many weeks in other complaints. Drinks of oatmeal and water should frequently be offered; and, when the appetite returns, the most nourishing mashies, but in small quantities, should be given, such as potatoes steamed or boiled, with oatmeal or bran; or simply bran mashies, with alternate feeds of the sweetest hay. The food which I gave I found very nourishing and effective: it was mashies of boiled or steamed Swedish turnips, with bran mixed, drinks of oatmeal and water, and some very sweet Italian rye-grass hay. My cows are all well—getting into their former condition; the milk has returned, and three of them have since calved safely, and are doing well.

I know there is a difference of opinion even among scientific men as to the propriety of bleeding; but my mind is quite settled on that point from practical observations. Two of my cows were not bled, the first and last that took it; the last I left to convince myself and settle the point: in both cases the fever ran high for two or three days, though the bowels were opened and acted on by the usual purgative medicines. Their cases were tedious; the skin of the tongue, palate, and part of the mouth sloughed off; also the udder and teats; their feet were severely affected, and are yet tender and cracked. Those that were bled suffered very little from ulceration: some of them were well and feeding greedily in thirty-six hours after the attack. The bleeding subdues the fever, and prevents the natural termination—suppuration; but bleeding must be done in proper time, at the very outset of the disease, while the fever is high: if a certain stage passes over, it may do harm. If no better medicine be at hand, I would recommend the mouth to be rubbed well three times a day with common salt (a handful at a time): it will clean and purge the saliva from the mouth, and, if bleeding has been freely done, it will prevent the vesicles from rising.



## CONSULTATIONS.

## No. XXI.

## ON DRENCHING CATTLE.

1st March, 1841.

Sir,—I TRUST your position at the head of the veterinary profession in Scotland, and your well-known desire to improve it, will induce you to pardon me, a perfect stranger, in thus addressing you, and requesting your attention to the following facts:—

About a month ago I had a fine quey calf, nearly five months old, that the servant told me in the evening she had observed passing water of the colour of sherry wine. I ordered half a pound of Epsom salts to be dissolved in a bottle of lukewarm water, and given to it, with two or three bottles of water-gruel immediately afterwards. The calf was eating hay when the servants went to the byre; they had not well left it ere I heard it roar; and on sending them back it was dying, and died in less than five minutes, without a struggle.

I caused it to be opened. We could discover nothing wrong with the kidneys, liver, gall-bladder, or any where, until, on opening the lungs, I found the tubes filled with frothy liquid, some of which I had also seen about the nostrils. I have no doubt that it was killed by part of the salts or gruel going down the windpipe. The servant-man, in holding it, stated that he had pressed his finger or thumb on the point of its tongue within the mouth while the liquid was being put into it.

As I supposed the holding or interfering with the tongue to be the cause of its death, I desired the servants never to do so again.

Two days ago I had an Ayrshire cow, ten or eleven years old, that had been at pasture throughout the day.

After being brought home she refused her turnips in the evening, but ate some hay. She also ate a little more hay after being milked.

At supper time, 8 P.M., she was lying, but rose like the rest, yet did not begin to eat any of the straw that was then put before her.

At 9 P.M. she was still standing, but had not eaten any of the straw; nor is it probable that she ate any of it afterwards.

At 7 on the following morning she was lying more on her belly than her side, with her feet and legs under her. The servants

endeavoured to get her up to milk her, but she seemed unable to rise. They then tried to get her to drink, but she would not; so they drenched her with five or six bottles of warm water-gruel as carefully as they could, and without touching the tongue.

It was near 9 A.M. when I saw her, still lying as described. No pulse was to be felt; she was breathing rather quickly, and looked very languid. I sent for the cow doctor, but before he came and had time to give her any thing, she was dead. She died very quietly, and without a struggle or a groan, about 11 A.M.

On being opened and very carefully examined, nothing wrong could be seen with the heart, liver, kidneys, stomachs, or bowels; but, on opening the lungs, I found in the tubes branching off from the windpipe above twenty small pieces of hay and straw, about half an inch in length, the hull or husk of some oats, and a small piece of turnip, about the size of a flattened pea, with a little white matter, which, on washing and drying, I think has every appearance of oatmeal, or the sediment of meal and water.

I now had no doubt that the substances found in the lungs were the cause of death; but how did they get there?—that is the difficulty. Could the bits of hay, straw, &c. have been lying in the mouth and carried down the windpipe by a small quantity of the gruel, although given with care, always from a bottle, and the tongue not touched? or could they get there by any other means? I could send you the bits of straw, &c., taken from the lungs, in a letter, if you wished to see them. The mealy matter might, perhaps, proceed from a drink or food which the cow got the day before she died—if you think it possible for such things to get to the lungs of a living cow without human interference. Had the cow been quite well until she got the gruel in the morning, I should, of course, suppose that there could be no doubt about it; but when you think on the fact that she refused her fodder at supper-time, was lying on her belly in the morning, and either could not or would not rise to be milked, or drink—all of which took place before any gruel was put into her, and that she allowed it to be given while lying and without offering any resistance—it is difficult to account for; neither does it seem very likely that many bits of hay or straw should be lying in the mouth so as to be carried down the windpipe by any of the gruel.

Would you have the kindness to favour me with your candid opinion of the case, and also to inform me what you consider the *safest method of putting liquid into cattle*?

I am, Sir, &c.

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## REPLY.

Edinburgh, 5th March, 1841.

Sir,—I have been prevented until now by an extreme pressure of business from answering your letter on the cause of the death of your cow and quey calf. I have no doubt that the pressure on the tongue of the calf, by interfering with its action, and also by preventing the action of the lower jaw, was the cause of the salts getting into the windpipe and producing death by suffocation. And although it is not so easy to explain the manner in which the straw, &c., got into the cow's windpipe, I think, if the whole history of the case could be got at, we should be able to trace the cause to some such accident. It is possible she might have allowed these matters to have passed into the windpipe accidentally, especially if she was attacked by any cough; but it seems to me more likely that there had been some other affection which gave rise to the symptoms that existed prior to the gruel being administered; and that, from rumination being suspended, she had had some portions of straw, &c., in her mouth at the time the gruel was given, and this, if she chanced to struggle or cough, would pass into the windpipe and ultimately destroy life.

The simplest and best way to give liquids to a cow, when she is tied to the stake, is for the operator to pass his left arm under the cow's jaw, and to take hold of her left cheek with two of his fingers, and with a horn or a bottle to pour the liquid into the right side of the mouth with his right hand, giving both the tongue and jaws as much liberty as possible. An assistant should steady the head, and assist in keeping it moderately high by taking hold of the horns.

When cattle are held by the nostrils it frequently produces coughing or sneezing, and substances are apt to get into the windpipe. It is a bad practice to press or gripe the windpipe or gullet in order to make them swallow, or to take hold of the tongue, as is frequently done; and when they cough the head should be let down at once, so that, if any thing has got into the windpipe, it may be driven out. Accidents, such as you have described, are frequent, and, I think, commonly arise from the causes which I have alluded to, or the rough manner in which cattle are too commonly treated.

I am, Sir, your most obedient servant,

WILLIAM DICK.

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## A CASE OF ENDOCARDITIS, INFLAMMATION OF THE INNER LINING OF THE HEART.

*By M. MERCIER, M.V., Evreux.*

AN entire horse, three years old, and of a sanguine temperament, had belonged to the proprietor during three months, and had been always well fed. He had been bled, and inflammation of the jugular vein had supervened; but in the course of a month the inflammation had been subdued, and the wound had healed, and the horse returned to his work on the 17th of March 1839.

On the 20th, he refused the collar, and appeared as if he was foundered. He was bled, and returned to the stable. At night the symptoms were aggravated, and I was requested to see him.

He was altogether out of spirits—the skin was hot—stiffness at the region of the loins—the respiration somewhat accelerated—the beating of the heart strong—the pulse full and quick—the mucous membranes of a yellow red colour—very great lameness of the left fore foot—and great tenderness at the scapulo-humeral articulation.

*Diagnosis.*—Acute articular rheumatism, with considerable fever.

I desired that the corn and hay should be removed and gruel given, and said that I would call again early in the morning, when I should be better able to judge of his case.

21st.—The patient lay down during the whole of the night, and now exhibited the same symptoms as on the preceding evening, with the addition of considerable constipation.

I abstracted eight pounds of blood, which being received into a glass, was, at first, of a deep red colour, coagulating in less than seven minutes, but the black clot not being more than two lines in thickness. The white clot, with a small portion of serous fluid, occupied the rest of the glass. I ordered emollient injections to be administered, the diet to be restricted to gruel and bran, and a mild liquid blister to be applied over the whole surface of the shoulder, and where the supposed rheumatic pains appeared to be most severe.

22d.—The tenderness and pain in the shoulder had disappeared, and it seemed to be transferred to the hip-joint, for much uneasiness was evinced on pressure of it, and there was very great lameness in that part. The other symptoms were as yesterday. I abstracted seven pounds more of blood, which presented the same character: a blister was applied over this joint.

23d.—The horse is continually down. The pain and the lameness have entirely disappeared, but the respiration is difficult and laborious—the movements of the flanks are accelerated and increased—a sound is emitted from the bronchial tubes—the respiratory murmur is detected over the whole of the chest, and percussion yields a strong reverberation. The beatings of the heart are violent, but no extraordinary sound is to be detected in the cardiac region. The pulse was full and accelerated, and I abstracted eight pounds of blood.

The blood was of a vivid red; it coagulated in six or seven minutes, and presented scarcely any thing but a yellow albuminous clot. Suspecting that I had to do with inflammation of the pericardium, I applied a large blister on each side of the chest.

25th.—All the symptoms have increased in intensity. The beatings of the flanks resemble those of a broken-winded horse—the pulsations of the heart are violent and precipitate—the pulse is weaker—and the general prostration of strength is extreme.

During the night of the 25th, the horse continued to utter the most fearful groans and cries. They were continued through part of the following day, the difficulty of breathing continuing to increase, until he died in violent struggles about six o'clock in the evening.

A post-mortem examination took place at eight o'clock on the following morning.

The lungs were discoloured, and their volume was considerable; they did not sink when thrown into water, but crepitated when pressed upon with the hand. The interlobular cellular tissue was infiltrated with air. The pericardium did not present any thing remarkable.

The heart was more voluminous than in its natural state, and the right ventricle was particularly distended and flabby. The cavity of that ventricle presented, 1st, a minute injection of capillary vessels over the internal membrane of the heart, especially on a level with the valves: this injection was also observable in the corresponding auricle. 2d, Numerous small ecchymoses, and particularly in the cellular tissue beneath the internal membrane of the right cavities: these ecchymoses were exceedingly red, but did not extend into the muscular tissue. 3d, A voluminous cylindrical clot, of considerable consistence, and of a yellow red colour, prolonging itself into the pulmonary artery and its larger divisions, but without adhering to the walls of these vessels.

This clot strongly resembled a tree provided with numerous roots and branches. At its base it adhered firmly to the surface

of the ventricular septum. It would be said that the clot had here begun to commence a process of organization. It was white, homogeneous, and so strongly adherent to the septum, that there seemed to be an amalgamation between the tissue of the clot and the fleshy fibres of the septum.

The lining membrane of the ventricle seemed to have quite disappeared, over a space as large as a crown piece; and at the termination of the adherence of the clot it had increased in thickness, and was opaque and white. At a little distance, the subserous cellular tissue was strongly injected. The muscular fibres, at the point of union with the clot, suddenly underwent a kind of transformation; they became white, and altogether confounded and homogeneous with the clot.

The fibrinous tree, through the whole of its extent, except at about an inch from the point of adhesion, was formed of concentric layers.

In the left cavities there was nothing abnormal, except a few ecchymoses, and a small quantity of yellow red clotty substance, without any adhesion.

Neither the abdominal nor cranial cavities contained any thing remarkable, nor was there any appearance of inflammation in the articulations of the humerus or the femur.

I regard this as a remarkable case of *endocarditis*, or inflammation of the inner and lining membrane of the heart. The symptoms observed during the life of the animal, and particularly the lesions that were found after death, could leave no doubt as to the nature of the disease.

The most remarkable of the phenomena which appeared after death was the fibrinous clot, which filled the right cavity of the heart, and extended into the divisions of the pulmonary artery. This clot was evidently formed during the life of the patient. In effect, at the points at which it adhered to the lining membrane, it presented unequivocal characters of organization. The internal membrane of the heart had disappeared, and there was a sudden and complete transformation of the parts. The symptoms during life were the effects or the indications of the strange process that was going forward.

It was sufficiently plain that the clot did not acquire the whole of its volume, and the peculiarity of its organization at or immediately following the moment of death, for it was formed by the successive additions of new layers. This was sufficiently proved by the disposition of the concentric fibrinous deposits.

What was the cause of this disease? Did there exist in this animal a rheumatic diathesis, as the two attacks of lameness which



successively appeared during the course of the disease would seem to indicate ; or, rather, did the aneurismal state of the heart predispose it to take on this inflammatory character ?

These questions are so much involved in obscurity, that I scarcely dare to offer an opinion respecting them.

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One circumstance in this singular and valuable case of M. Mercier deserves particular attention ;—it is the coincidence of the inflammation of the lining membrane of one of the cavities of the heart, with the painful affections and sad lamenesses to which this animal was subject.

This is particularly important, connected with another fact, first observed by M. Bouley, jun.,—the development of *sessamoideal rheumatic synovitis* at the close of pleurisy.

By the side of these, and having considerable analogy with them, is a curious fact. When an irritating fluid is injected into the pericardiac sac, by means of a puncture between the cartilages of the sixth and seventh rib, painful disease in the joints is manifested in one or more of the limbs, at the very time that inflammation is developed in the serous membrane of the heart. These pains are sometimes so intense, that the animal can scarcely walk. I am now instituting experiments on this subject, the result of which, at some future time, shall be given.

H. B.

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[I am far from being assured of the connexion of this disease of the heart, with any rheumatic affection ; but every practitioner of considerable experience will recollect states of the heart very similar to that described by M. Mercier. Small vegetations—a species of polypus—have adhered to the lining membrane of the heart ; they have assumed the character of real organization, and have ultimately become united with the membrane, which they at first only mechanically covered. There has been a true vascular communication between the membrane and the polypus. This union being once established, the polypus rapidly grows ; it distends the neighbouring vessels—it produces aneurism of the cavity which it occupies—and, connected with this, a state of inflammation soon arises, which causes extreme disturbance and pain in the heart, or the vessels which communicate with it, and destroy the animal.

What are the causes of these abnormal concretions ? Is there any peculiarity in the contraction of the heart ? a want

of power to expel the contents of the ventricle?—or is there some particular constitution of the blood itself, which, in certain states of the system, gives it a tendency to coagulate—as we know that at other times the coagulation is prevented? These are questions which much concern us. Mr. W. Percivall has nobly and beautifully led the way to the unravelling of some of these mysteries in that invaluable work, his “Hippopathology.” The field is wide, and there is ample room for other labourers.]

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## RHEUMATISM IN THE HORSE.

*By Mr. W. C. SPOONER, V.S., Southampton.*

IT cannot be doubted that rheumatism, both in its acute and chronic form, is met with, from time to time, in the horse, though by no means so frequently as in the human subject. I am, however, inclined to think that it exists oftener than is generally supposed, and many of those flying obscure lamenesses are doubtless of this character, and account for the anomalous fact now and then to be found, of a lame horse *working* sound. I have in my eye several instances of this occurring. The diseases of joints in colts, late noticed in THE VETERINARIAN both by foreign and domestic authorities, are doubtless of a rheumatismal character: a few cases that I have met with in colts appeared of this nature, the disease flying from one joint to another, and attended with large and painful swellings. Cattle, perhaps, are still more subject to this disease, and under the obscure names of joint felon and joint murrain we have an inflammatory disease of the joints and sinews of a rheumatic type.—A short time since I was requested to examine a cow that had calved two months previously in a cold and wet situation, which, according to my informant, had given her a chill across the loins; for she had been unable to walk or stand since. She had been under the care of a farrier, who, finding at length that the joints were much swollen, said she had the joint murrain, and therefore he could do nothing more for her. I found considerable swellings in front of each knee, which, though soft, did not appear to contain pus. The off hind hock and leg was also much swollen, and very painful, and in several places the skin was worn through to the bone from constantly lying down. The pulse was very quick, and although the animal would still feed, the constitution was evidently

wearing away from pain and fever. Being convinced that sad alteration of structure had taken place, both externally and internally, I desired that the animal should be destroyed, which was accordingly done; and I examined the body. The swellings of the knee I found consisted of a serous and bloody fluid, in which floated shreds of tendons and ligaments, and, in one knee, the capsular ligament had given way. In the hock a complete abscess had formed among the sinews at the back, and was eating into their very substance, and extending some distance below: the thigh was also much diseased. In the abdomen there was a quantity of serum, in which flakes of lymph appeared floating about. Considerable adhesion of the viscera to the abdomen had also taken place, and appearance of inflammation about the loins. The pericardium likewise contained serum. Here the same class of membranes appeared diseased throughout, and, in my opinion, the case was of a rheumatic character.

A case of very decided rheumatism in a pony lately came under my attention. I was first requested to look at him on account of lameness of the off fore leg. He evinced considerable pain when the limb was raised, the seat of which was very distinctly pointed out as the muscles of the shoulder. The animal had been driven rather a long journey on the previous day, and I considered had been thereby strained. I bled from the arm, and ordered the shoulder to be fomented, &c., after which an embrocation was rubbed in. In the course of a week or two the lameness almost suddenly left him; but in a few days afterwards he was lame in the off hind leg. I now pronounced it to be rheumatism. After awhile the lameness left him; but shortly afterwards he was brought to me very ill with, as I considered, the symptoms of pleurisy. He was bled and otherwise treated, and the next day appeared much better. Soon afterwards he was lame in the near fore leg, then the near hind leg; and the pony appeared to suffer much pain; this went on getting gradually worse, and the urgency of the lameness appeared to fly from one joint and limb to another. Very little treatment was employed, as the owner did not wish to incur much expense, and the animal, though useful, was not very valuable. Opium, however, appeared to give only temporary relief, and poultices and external stimulants afforded no benefit. The upper joints of the hock became greatly distended with synovia, producing both thorough-pins and bog-spavins; the knees, too, were much swollen, but the swelling was hard, and promised to become bony. The pain was so great that the animal would scarcely get up, and then could stand with difficulty. At length, to cut the matter short, about two months from the commencement of the disease the animal died.



*Sectio cadaveris.*—The muscles connecting the humerus to the chest, as well as those in the neighbourhood of the hip joint, were, in places, in a state approaching to mortification. The hock joints contained a large quantity of synovial fluid, thick, and nearly opaque; and in one hock, at the upper and back part of the joint—the seat of thorough-pin—the synovia was in a coagulated state. The capsular ligament was considerably thickened at the seat of bog spavin, and appeared red and injected. There was considerable adhesion of the viscera of the chest, and inflammation of the pleura costalis; water in the pericardium, enlargement of the heart, and vomicæ in one lung. The liver was found considerably thickened, and, on being cut into, exhibited a curious appearance: white lines, about an eighth of an inch in thickness, appeared running irregularly among its substance, giving it quite a marbled appearance. These white lines appeared to be of a scirrhus nature; but the greater portion of the liver was rather darker than common, though readily broken down.

I had known the pony nearly two years: he was about ten or twelve years old, and used to carry a great deal of flesh. Within the last six months he had fallen off in this respect, though he by no means looked poor; but the owner finding that he did not perform his journeys with the same vigour as before, though he usually set out with much spirit, sold him to a gentleman, who, not approving of him, shortly afterwards re-sold him to another, from whom he passed into the hands, at a reduced price, of a respectable dealer, who thought he had a bargain, but found to his cost that it was by no means a fortunate one. The post-mortem appearances fully explained the history of the case—the loss of condition was, no doubt, to be attributed to the diseased state of the liver, which was probably the prior disease. The flying lamenesses, muscular pains, swellings of the joints, inflammation of the sheath of the tendons and symptoms of pleurisy, all appeared to be owing to the rheumatic affection which, though attacking different cavities and flying about from part to part, yet exhibited throughout the same distinctive character—attacking at each time the same description of membranes.

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## ON THE DISEASES OF FOWLS.

By ———, M.R.C.S., Bath.

IN your number for October last I observe that there are two papers descriptive of a verminous disease existing amongst poultry. In the first paper, written by a gentleman in Somersetshire, the worms, it appears, were found in the trachea; and in the second paper, written by M. Blavette, they were detected in the alimentary canal. Now, Mr. Editor, you observe in a note appended to the latter gentleman's paper, that "your readers must have noticed the different location assigned to the parasites by these two writers, and at the same time assert that you have your opinion," &c.

Whether or not these parasitic animals were found in both of the situations as mentioned by these writers, I am not at all prepared to answer; but from the symptoms (if we are to judge in these cases by the symptoms, as well as by the morbid anatomy) mentioned by the two gentlemen, I am inclined to think that the worms might have been situated in different organs or tubes, constituting, therefore, two diseases; the principal diagnostic symptom of which is that mentioned by the first writer on the subject, viz. "it commences by something like an attempt to cough, and this increases until there is a constant *gaping for breath* in the chickens." Now I can readily imagine with this writer, that, when these worms get to a certain size, they suffocate the chickens by congregating into a mass. In the second paper no symptom of the kind is mentioned.

In this part of the country the disease described by the country gentleman is familiarly known by the name of the "pip." The ravages it makes in certain seasons in some farm-yards are sometimes very great. With regard to treatment, a farmer in this county once informed me that he seldom lost a patient in this disease. If on further investigation of this complaint it turns out, as your anonymous correspondent asserts, that the parasitic animal is found in the windpipe, I know of no remedy which would be more likely to effect a cure than the one the farmer invariably adopts, which is this:—he takes a common peck measure, places the chickens in it, then covers it over with a cloth, and blows the smoke of tobacco into it, which he does in the following way:—he gets a tobacco pipe, and lights a little tobacco, which he places at the bottom of the bowl; he then moderately fills the pipe, covers it over with a little coarse linen, and lightly blows from the opposite end of the pipe, after placing it in the peck, when, of

course, the smoke passes out of the bowl into the measure. He continues blowing till the chickens are almost lifeless. He now removes them into the air, when they soon recover.

I may here mention that one of the modes of treatment in this disease is, to hold the chick over a smoky fire, which in some cases appears to have a beneficial effect; but whether it arises from the warmth communicated from the fire to the animal, or from the salutary effect of the smoke on the lungs, or its destructive effect to these vermin on its passage into the lungs, it is difficult to say: if the latter be the *modus operandi* of the smoke, I think you will agree with me that the tobacco smoke is still more likely to be efficacious. The abovementioned treatment is well worth a trial, and, should it ultimately prove to be of any service in the treatment of this destructive malady, my only object in thus troubling you with these undigested lines will be fully obtained.

Bath, November 19, 1840.

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## ON FUNGUS HÆMATODES.

*By Mr. J. D. HARRISON, V.S., Stockport.*

[Continued from page 25.]

MY last communication contained the result of an unfortunate case; and in a continuation of the same subject your readers will be presented with another of an equally fatal nature, where the ravages of this malignant disease were clearly manifested, and its perfect identity with one bearing the same name in man equally characterised, not only from the effects produced on the animal when living, but likewise the lesions which appeared on making a post-mortem examination.

On the 25th of December, 1837, my attendance was requested to a mare, stated to be dangerously ill. I was desired to bring my instruments with me, as the owner thought that an operation would be necessary in order to save life. On my arrival at the place, my attention and olfactory sensations were powerfully arrested, on first entering the stable, by that very peculiar and strong stench attendant on wounds when in a state of gangrene, and which naturally led me to infer that, in this instance, my instruments would be valueless, and the result of my attendance and efforts very doubtful.

On looking at the mare—that was a remarkably short-legged,



stiff, and handsome one, of the cart breed, and rising eight years old—I found a large fungous excrescence (from the cyst of which a bloody discharge was constantly running) pendent from the right or off mamma, as low as the hocks, with the edges of the cyst (from which it was by the process of sloughing becoming detached, being at that time retained in its situation by its own membranous attachments) so surprisingly everted, that words are inadequate to convey the slightest idea of the miserable spectacle that was presented, or the horror which I felt while viewing it. Finding that the mare was gradually sinking under gangrene, and that death would inevitably claim his prize in the course of a very few hours, an operation at that time, and under such circumstances, would have been useless and cruel; therefore the only remedial measure resorted to was the application of a solution of the chloride of lime, more in order to destroy the excessive fœtor, than on account of any curative effect I could expect from its application. In the course of four or five hours after I left her, the fungus, as I anticipated, dropped off, an event which the mare did not survive more than an hour.

Having a strong recollection of the former case, I was determined if possible to obtain an after-death examination, and went with that intention to the proprietor on the following morning, who immediately acceded to my wishes, giving me, at the same time, the mare's history, which proves highly interesting as corroborative of the true nature of the disease, and the opinions which I have, in a former paper, advanced.

Mr. P. informed me that he bred the mare, and to his own knowledge he and his father had been in the possession of this—I may almost say—indigenous breed without a single cross for the last fifty years. That during that time he had known several of the breed with tumours variously situated, but (until the present case brought a faint recollection to his mind of a similar one during his boyhood, and where death took place under similar circumstances) the tumours, so far as he knew, had never interfered with their bodily health, but had remained stationary in all of them, apparently free from pain—never at any time perceptibly increasing or decreasing during their life, and their deaths having no reference whatever to them, but always arising from natural or accidental causes.

The subject of the present case had borne two foals, and until the preceding fortnight had been a remarkably healthy mare, and had not had a single grain of medicine given to her during life. The tumour was first observed when she was about two years old; and previous to this inflammatory action being excited in it, its size had never exceeded that of a hen's egg, in a trifling degree

enlarged, and somewhat tender. It now most rapidly increased for three or four days, at the expiration of which period her appetite began to fail, her hind legs to swell, and it was remarked that she stood up all night. This position she maintained until her death.

A considerable aggravation of all the symptoms took place in the night between the ninth and tenth days. The fungus was almost treble its original size, and was highly sensitive—the appetite was completely gone—she appeared to be labouring under excessive and excruciating pain, and her thirst was very great. Fomentations were applied to the part, which apparently alleviated her pain, and gave her relief during their application; they were, therefore, continued until the 23d of the present month, when a red surface was observed at the inferior part of the tumour, which was attributed to the water being applied too hot, and the fomentations were consequently discontinued.

On the morning of the 24th, a large opening with a red protruding substance was visible; upon seeing which, the owner flattered himself that the tumour would then very soon burst, and the mare become relieved thereby; and what still further increased his hope was, a profuse and continual discharge of a watery fluid, and of a highly offensive smell, from the cyst. These symptoms, however, were fallacious, for the substance still further and further protruded—the discharge became still more abundant and offensive, so much so, that the litter from having become completely saturated with the discharge, had frequently to be removed, and clean straw put in its place. The edges of the cyst became gradually more and more everted, and, in conjunction with the tumour, acquired a deeper red colour. Finally, it assumed a black hue, which was the state I found her in on the morning of the 25th.

The tumour had most rapidly increased, for, when I weighed it after her death, it was more than six pounds and a quarter. When cut into, which I did right through its centre, it presented one solid mass, of a dark or gangrenous colour, and of a semi-cartilaginous texture, but not one single drop of fluid; neither did I perceive the slightest cavity in its centre in which any fluid could have been contained, or any softening of any portion of the tumour evincing a probability of any being formed at a future period, provided that gangrene had not produced so rapid a termination. The tumour was, in figure, almost pyriform.

*Sectio cadaveris.*—My first object was to ascertain, if possible, how far the disease had extended; but here I found a work of far greater difficulty than I could possibly have anticipated, for in some parts—among the tendons of the abdominal muscles for

instance—I could not discriminate where the diseased structure terminated and the healthy commenced. The parts which had become gangrenous were defined clearly enough, but beyond them a visible diseased action was going on amongst the tendons of the abdominal and transversalis muscles, and extending anteriorly almost to the sternum. Posteriorly the same effects were seen, as well in the fasciæ of the thigh as in the connecting cellular membrane of its muscles, the interstices of which contained a great number of small hard tumours. I will, however, endeavour to describe to you the appearances of the parts as they presented themselves, although they are far from being satisfactory to me.

Upon examining the cyst, I found it one thick mass of gangrenous fungus to an almost indefinite depth, embracing the entire half of the mammæ—continued, anteriorly, near to the umbilicus; and posteriorly and inferiorly almost half way down the thigh. The pelvic viscera were all healthy, as were the thoracic and abdominal, with the exception of the liver, which contained nine hard tumours, each as large as a filbert. The fasciæ of the thigh had also several of a smaller size upon and under them, and the left or near mamma contained two small ones, being, if put together, about the size of a pigeon's egg; but although they were almost in contact with that which was the cause of death, they did not appear to be the least inflamed or affected. All the tumours, when cut into, presented a solid and fibrous character, similar to the large one which had sloughed.

Before I left Mr. P. he wished me to look at a two-year-old filly, the produce of this mare, who had a tumour on the inside of the near thigh almost as large as a man's fist. I found it quite insensible, but very hard and moveable; and I did not hesitate in pronouncing it to be of a similar character, as from the time it was first seen, which was when the animal was weaned, it had not made the least progress. I would gladly have removed it, but to this the owner would not consent, saying, that so many of the breed having exhibited similar tumours without any ill consequence, he was determined that this one also should take its chance.

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## CASES OF RUPTURE OF THE STOMACH.

*By Mr. H. W. SPARROW, V.S., Alford.*

ON the evening of Thursday, Nov. 19, I was requested to see a draught horse, seven years old, the property of G. Winteringham, Esq., of Willoughby. The horse had eaten a great quantity of cut meat early in the morning, and had been out all day



at plough. About three o'clock in the afternoon he fell down and rolled about during two or three minutes; he then got up, and continued his work without any apparent pain for an hour. A few minutes after four o'clock he fell again, and rolled. The man got him up, and brought him home, a distance of two miles. I was then sent for, and it was six o'clock before I could see my patient. He evinced the following symptoms:—he was perspiring profusely—the ears and legs cold—the pulse hardly perceptible—an immense quantity of a dirty-coloured fluid continually flowing from the nostrils—the membranes pale—respiration much embarrassed.

I thought it was a hopeless case, and as such expressed my opinion to the owner, who wished me to do something. I bled him to the extent of  $\text{℥viii}$ , and gave the following draught: sol. aloes  $\text{℥iv}$ , nit. ether.  $\text{℥ij}$ , op. tinc.  $\text{℥i}$ , in half a pint of warm water: the abdomen also was well stimulated.

At half past six he gradually got worse, vomiting continually. There was great prostration of strength, and cold sweats; and about seven o'clock he died in great agony.

*Post-mortem appearances.*—On laying open the abdomen and exposing the intestines, a great quantity of dung was found mingled with them. The intestines were filled with dry and hard cut meat. On coming to the stomach, but without touching or displacing it, a rupture of that viscus was exposed to view, commencing near the cardiac orifice, extending about ten or twelve inches. The stomach was much inflamed. The other viscera were perfectly healthy.

I was lately called upon to attend a two-year-old colt, the property of Mr. Hanson, of Driby, who informed me that the animal had vomited a bucketfull of greenish fluid. On my arrival I found him dead. On opening him, the intestines were found perfectly healthy, the stomach full of grass, and much distended with gas.

The owner informed me that the horse had been on a poor kind of land until within the last day, when he was put into a rich pasture, where I should suppose he overgorged himself. Should you think that in this over-distention the cardiac orifice (so beautifully described by Mr. Ferguson) becomes ruptured; or is there a loss of the natural energy of these singularly constructed muscles, and hence vomition?

On some future opportunity I shall probably venture to offer a few observations on inflammation of the udder in cows. The Essay by M. J. P. Lecoq, published in *THE VETERINARIAN*, is exceedingly well written. The treatment he pursues is judicious, and not described in so roundabout a way as are some of these cases by our own countrymen and by his.

## A CASE OF RUPTURE OF THE FLEXOR METATARSI.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

ON the 21st of November, 1840, the Rev. R. Mayow, of this town, rode after the hounds a fine chestnut horse nearly 17 hands high. After a burst of twenty minutes, they came to a leap, where the horse's hind legs slipped into a boggy ditch with his breast on the fence, and he thereby became staked in the breast, while his hind legs sunk in the ditch, and became fastened there. In a short time, however, the off hind leg was liberated, but the other he had very great difficulty in pulling out.

When he came to the bank, it was found that some injury had taken place in the near hind leg. A farrier near Cholmondeley was called in, who said he had ruptured some of the muscles on the *back* of the haunch above the hock.

The horse was brought home a distance of eight or nine miles. I saw him immediately after his arrival, and found him rather exhausted. I examined the breast, but found that no mortal injury had been inflicted. I then went to the hind extremity, and saw in a moment that there probably was a rupture of the flexor metatarsi muscle or its tendon, and most likely of the latter.

The action of the limb indicated the loss of power of that muscle, as the leg could be bent at the hock completely straight behind, and he had no power of any importance before, in opposition to those antagonist ones—the gastrocnemii—behind. In some of his movements the limb appeared quite loose about the hock, and was occasionally knocked against the other leg. On moving him about, there was a twitching up backwards of the leg at the hock, and when he walked forwards, it was evidently done without the concurrence of the flexor metatarsi.

There was a soreness in front at about six inches above the hock, and also a little higher up, and the usual tenseness and distinctness of the tendon could not be seen. There was no apparent pain of any importance.

*Treatment.*—In about two hours after he came home, I took four quarts of blood from him, gave some physic, and ordered fomentations.

22d.—I found him almost as lively as usual:—continue fomentations, and keep him quiet.

25th.—From the last date to this we continued to foment and keep him quiet. The wound in his breast is going on satisfactorily, and no doubt will do well. I now blistered the front of the hock and thigh to keep him quiet, and put on a cross line

to the back of the fetlock and over the neck, so as to bring the divided parts into apposition. I also put on a patten-shoe raised four inches, but we found he would not stand on it, but knuckled over, and most likely would have injured himself, so I took it off. After this he was merely kept quiet, and on the 20th Jan. 1841, was ridden out, and little was found to be the matter with him. He is now as well as ever, has been hunted several times since, and is regularly ridden.

There was a case exactly similar to this when I was at the College last year, but how it occurred I do not know: it was sent out, after being kept there about three weeks as incurable. What became of it I know not, but I should like to be informed whether it ever got well. About the same time there was in the College a case of rupture of the lateral ligaments, or side of the gastrocnemius internus tendon where it is attached to the side of the os calcis; and the consequence was, that the tendon slipped into the hollow, on the outside, below the os calcis and tibia.

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## THE EFFECT OF OPIUM IN VARIOUS DISEASES.

*By Mr. J. HORSBURGH, V.S., Dalkeith.*

I SEND the following remarks, in order to attract the attention of others with better opportunities and more talent than myself to the question, whether opium can be properly and beneficially employed in the inflammation of organs or surfaces essential to life.

The disease to which I more particularly allude, and in which its use would at first sight appear to be peculiarly indicated, is inflammation of the mucous membranes of the head, throat, and lungs. I am not aware of this inflammation, having, as yet, been combatted by the use of opium, although I frankly acknowledge my opinion that it is likely to be found of the greatest value.

In the latter part of 1840, catarrhal fever was prevalent in and about Edinburgh, and, I understand, was fatal in very many cases, one farmer having lost no fewer than seven horses.

In January it broke out in this neighbourhood, and several horses died under the ordinary treatment. I had recourse to the use of opium, four drachms of which were given in a ball after bleeding until the pulse was affected. The animals were clothed warmly, and left without any thing else being done, except that



they were allowed as much as they would drink of lukewarm water.

For three or four hours the pulse was accelerated, and occasionally to 90, after which it gradually sunk to about 50. It was full, with slight intermissions. The sedative effect of the drug was then apparent. The animal lay down, and continued chiefly down for twelve hours, after which the symptoms, with the exception of cough, were very much relieved. No blister was had recourse to. The cough gave little trouble, for it was changed to a full free one, such as we find in common cold, and which readily yielded to a few doses of emetic tartar and nitre, with a laxative, given two days after the opiate. There was, however, one exception, and a somewhat singular one. A Highland pony was so much better after the above treatment, that, twenty-four hours after the first attack, which was a severe one, it bolted out of the stable when I went to visit it, and galloped about the fields for an hour, with all the people in the place running after it. Inflammation of the lungs exhibited itself on the next day, and of which it ultimately died.

I do not mean to say that this practice will do in all cases. The disease may have advanced too far before our assistance is required, and then the administration of opium would be worse than folly; but when we see our patient within six or seven hours, or where he is immediately under our eye, I think that the profession would find it worthy of a trial. I should be thankful to obtain the opinion of my brethren on this subject.

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## A CASE OF RHEUMATISM AND TETANUS SUCCESSFULLY TREATED.

*By Mr. T. G. WEBB, Whitechapel.*

*Jan. 25th, 1841,* I was requested by Mr. John Cramp, of Whitechapel, to attend to his bay horse. He had had rheumatism, or partial paralysis of the hind extremities, caused by having been driven until he was warm, and then standing some time at the door exposed to cold and wet. I had him removed into a large box, and abstracted about eight pounds of blood, when the pulse began to falter; after which I gave ʒviij of Barbadoes aloes and 1℥ of ol. lini, and applied the mustard embrocation to the lumbar and posterior part of the dorsal vertebræ. A pail of warm water was fixed to the manger, warm mashcs were ordered, and enemas were frequently injected.

26th.—Very little change, except that his physic is beginning to operate. Repeat the mustard embrocation, and continue to give the clysters.

27th.—His physic has operated well; but I cannot say that he walks any better. Repeat the mustard.

29th.—He appears to be mending, and has evidently more use of his hinder extremities.

Feb. 1st.—He is mending fast. Give ʒii of aloes.

5th.—He is apparently well, and I have returned him to his own stable.

12th.—I was sent for in great haste, the bay horse being apparently dying, and his jaws locked. He had tetanus. His pulse is 40; his head is protruded; his jaws rigid; his ears pointed. He cannot bend his neck; the membrana nictitans is protruding over the eye; the legs wide apart, and the tail a little elevated. I had him removed with considerable difficulty from the stable into a box, and would have bled him; but being so irritable a horse, I thought that I should do more harm than good by it.

I gave him sixty grains of the farina of the croton nut in a slop mash, which he ate in the course of the day. The poll, jaws, neck, and spine were rubbed with the mustard embrocation morning and evening, and frequent enemas injected.

13th.—The medicine is operating well. Continue the mustard embrocation.

14th.—Gave ten grains more of the croton in a slop mash, continuing the embrocation as before.

15th.—The jaw is not so rigid. Give ten grains more of the croton, and apply the embrocation once a day.

16th.—Much better: the embrocation to be used as yesterday. Give five grains of croton.

This treatment was continued until the 21st, when the horse appeared to be perfectly well. He was sent to work on March the 12th.

He is driven nearly every day, and does his work as well as ever.

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## A CASE OF TETANUS IN A COW.

*By Mr. W. Cox, Leek.*

IN May, 1840, I was sent for to a heifer, the property of Mr. Bostock, which I immediately perceived to be labouring under locked jaw. She was four years old, and had produced a calf

a month previously. When put out to grass, she was seen to fight very much with one of her companions. In a few days after this she began to go very stiff, and give over eating, except that she would mumble a little warm mash. The owner, thinking that she had taken cold from being exposed to the weather, and remembering the combat she had had with her companion, neglected to call in any medical assistance until six days after the first appearance of the disorder, when he sent for me. I bled her largely, and repeatedly rubbed her spine with a strong liquid blister, and likewise clystered her occasionally with a decoction of marsh mallows, with a little opium dissolved in it. Although the jaws were firmly clenched together, I could administer any quantity of gruel or medicine by means of an elder pipe fourteen inches long, with a bladder attached to it. Sulph. magnes. ʒxij; ol. lini, half a pint; ol. croton. 30 drops; ext. belladonna, ʒss, were given every ten hours; but she died on the third day from my first seeing her, without any purging being produced, or abatement in the symptoms.

## ON RED-WATER IN COWS.

*By Mr. J. A. HUGHES, Aston Corvedale, Salop.*

IN the month of October last I attended a cow for an ulcer in one of the hind feet, and in the treatment of which she slipped down. About three days afterwards I was sent for on account of symptoms of red-water that had appeared. The pulse was quite regular, the respiration tranquil, and the faces having their usual character.

The urine was thick, and of a dirty black colour when first caught; but when left to stand, changing to a dirty pink hue, depositing a considerable sediment. This sediment did not assume the slightest appearance of clots, but when the supernatant fluid was poured off, appeared like dirty blood, but with no inclination to congeal.

I first administered some mild aperient medicine in order to get the bowels into a somewhat relaxed state, and then gave, every morning on four successive days, half an ounce of sulphuric acid in milk. Not the least effect seemed to have been produced.

The following medicine was then administered on two mornings:—Tr. opii et sp. æth. nit. ā ā ʒi. This produced no effect. Hyd. chlor. et pulv. opii ā ā ʒi were given on three consecutive days, but the urine continued the same. Four ounces of alum and six grains of powdered cantharides were then tried during the same length of time, and, after that, four ounces of spirit of turpen-



tine and two of spirit of nitrous ether, without the slightest favourable or unfavourable symptom occurring.

I saw her in December last, and she looks very well; but the urine is in the same state.

I should indeed be glad if some of your correspondents would inform me, through the medium of your valuable journal, whether they imagine that the change in the urine was the consequence of some internal injury arising from the slip during the dressing of her leg. She is now feeding for the butcher. The owner had three cows in the wet summer of 1839, from whom there was a discharge of urine similarly coloured. Our land is bare, and woody.

## A CASE OF PUERPERAL FEVER.

*By Mr. THOMAS WALKER, Rothley.*

ON the 26th of March, 1841, ten A.M., I was requested to attend a cow, the property of Mr. Pettifor, Sileby. She had calved on the previous afternoon without any difficulty, and had eaten and drunk well afterwards; but this morning she was found down, and unable to rise. Before my arrival several knowing ones had seen her, and pronounced her disease to be "tail worm;" and the treatment they recommended was to slit the tail at the soft space between the bone and the cartilaginous portion at the tip of the tail, and tie it up with salt.

She had made several unsuccessful attempts to rise. I found her lying on her left side, with her hind legs stretched out from under her, apparently free from pain; her muzzle dry; one horn hot, the other cold; legs cold, and on pricking the hinder ones with a needle she did not evince the slightest pain; pulse 60, full and bounding. A very small quantity of fæces had been voided, of a black colour and glossy appearance. She had not been seen to pass her urine or to ruminate this morning.

*Treatment.*—Bleed until the pulse becomes soft and falters. From a gallon to five quarts were abstracted, after which she began to pass her urine.

R Sulph. magnes. ℥viij  
 Flor. sulph. ℥iv  
 Nit. potassæ, ℥j  
 Pulv. zingiberis  
 Gentianæ ā ā ʒss.—M.

Give in a gallon of gruel.

R Sinapis ʒij  
 Acid. acet. dilut. Oss.—M.

To be well rubbed over the dorsal and lumbar vertebræ, and par-

tially over the sacral bones, and in three hours to be again well-rubbed with diluted warm acetic acid.

8 P.M.—I again saw her. She had not attempted to rise. They had, according to my directions, turned her over twice for the convenience of milking her. The bowels had been acted upon, and she had voided her fæces four times in considerable quantities, and the last in a soft state. I considered her in a favourable way. I rubbed on the course of the spine  $\frac{3}{4}$  of terebinthinated tinc. of cantharides, and left a bottle of ol. ricini, half of it to be given in the morning in gruel.

27th, 6 P.M.—I found my patient still down. She has not been seen to attempt to rise; she lies with her hind legs more under her; she has eaten some hay and drunk some water. Give the remainder of the ol. ricini, and rub on the course of the spine the vesicatory already recommended. This caused her again to pass her urine. Although she is still down, I consider her better.

28th, 9 A.M.—Found my patient in a convalescent state, and on her legs. They had turned her over and milked her on the previous night about eleven o'clock, and left her until about twelve o'clock, when they went to look at her before going to bed. To their great surprise they found her on her legs, and feeding; since which time she eats and drinks, lies down and gets up, as though nothing had been the matter; the secretion of milk increases rapidly.

P.S. Since writing the above I have had two more cases of this complaint, which have both yielded to the same treatment. It appears likely to be a prevalent disease in this locality: whether it is owing to the severity of the winter or some other cause, I am unable to say.

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### MR. KENT'S REPLY TO THE CHARGES OF MR. GEORGE FISHER.

[WE reluctantly insert this letter from Mr. Kent. We would not debase our Journal by the admission of personal and virulent accusation on any subject; but we feel that Mr. Kent has a claim upon us here. Mr. Fisher's reply, we trust, will be brief, and temperately written.—EDIT.]

DEPENDING on the accuracy of your report of the proceedings of the Veterinary Medical Society, I respectfully claim a place in your periodical for the insertion of what I now communicate,

and of a reply from Mr. George Fisher, should he choose to give me one.

In the March Number, page 95 of the Proceedings of the Society, "Mr. George Fisher's attention had been first called to this disease in the case of a horse then under its influence, which was the property of a veterinary surgeon in Bristol. The owner had shortly before given £70 for it.

"When he saw the horse, it presented the common appearances of influenza. There was injection of the mucous membrane, and considerable swelling of the extremities, sheath, &c., accompanied by general lassitude. The surgeon to whom the patient belonged treated it as a case of bronchitis, by copious blood-letting and purgatives, and the result was, that the horse died."

Thus stands Mr. G. Fisher's first case, as stated by him; but thus stand the facts:—I purchased the horse of Mr. Withers on May 21st, 1839, for £55, and it died on Sept. 3d, 1840. Without attributing to Mr. George Fisher any improper motive, or designed misrepresentation, I must say, that he ought to have been somewhat more careful that the facts which he states were founded on truth. His account is erroneous from the beginning to the end.

He next asserts, that when he saw the horse it was ill of influenza, with injected mucous membrane, &c. I believe he never saw the horse until it was dead; but of this I am absolutely certain, that the legs, sheath, &c., never were swelled, and that the mucous or pituitary membrane of the nostrils, and the conjunctiva of the eye, were of a deathly paleness from the commencement to the termination of the attack.

He moreover says, that I treated the case as one of bronchitis, and bled copiously, and gave purgatives. The whole of this statement is utterly erroneous. The horse was not bled, nor did he have a purgative. I was quite certain that he was free from bronchitis and influenza, and that the disease was purely *gastro-enteritis*, and for this I treated him. To talk about taking away hard food, and giving mash and gruel to a horse that from the time of being taken ill until his death never ate or drank, is as absurd as his description of the appearances of the disease is untrue.

The post-mortem appearances were high inflammation of the mucous membrane of the stomach and the large intestines. The membrane of the cæcum was in a state of gangrene. When I first saw him his pulse exceeded 100, and could not be found at the jaw.

Were I to follow in detail the other three cases, I could shew



that the same absurdity and erroneous statements pervade the whole. The three horses which I treated did not, altogether, lose twelve pounds of blood—of this I am quite certain; nor did I give a purgative dose to any of them. The farther refutation of such contemptibly erroneous statements would be waste of time and paper.

The fourth case never was under my treatment. His owner did not know that I had lost a horse, and George Fisher does not know how I treated any of the horses. The third case which he brings forward he never saw during the illness of the animal, nor after death. The fourth horse when he went to Mr. Fisher's father's had a pulse of 36; he ate corn and hay in my presence the day before. *He was not sent for medical treatment*, but because his owner was removing his residence, and wanted the coachman to assist. He, however, became ill at Fisher's stables, and the coachman told me that, after the horse returned, he was not able to work for seven weeks, and was subsequently sold for a trifle, as not even then become serviceable.

My communication is, this time, of a defensive character; not that I care about any effect it might have on me: but if such unfounded—such utterly false statements—are made at meetings of your Association, it can neither receive benefit nor credit by them.

You would have received this a month ago, but I had not read the Association portion of your journal.

I am, &c.

## ON THE PROCESS OF HEALING THE WOUNDS MADE IN CASTRATION.

*By Professors RENAULT and BOULEY, Alfort.*

THE wounds inflicted in castration are necessarily complex, since the tissues injured in the operation are altogether dissimilar from each other; such as the serous, the fibrous, the cellular, and the cutaneous tissues. Whatever is the mode of operation employed, observe the natural process by which the wound is healed.

When the circulation is interrupted in the testicular cord by the pressure of the ligature or the clamps, clots of blood are formed in the veins and in the arteries, which clots should afterwards serve for the obliteration of these vessels. On a level with the ligature the exterior cellular tissue of the vessels and nerves are

infiltrated with serosity, and this infiltration gives to the cord a greater bulk, and causes it to fill more completely the sac of the scrotum, and places more immediately in relation with each other the serous membrane which covers it and that which lines the parietes of the sheath.

On a level with the ligature, whether by the clams or any other means, the serous vaginal membrane becomes the seat of adhesive inflammation. Vessels develop themselves in its substance, and a plastic lymph is exhaled from its surface, like that from the surface of the inflamed pleura, or from the surface of any unhealthy serous membrane. This lymph is not slow in becoming organised, and establishing an adhesion between the termination of the testicular cord and the lining membrane of the scrotum. It is thus, as may be seen, by the first adhesion, that the sac of the scrotum is obliterated.

This result soonest takes place when the castration is performed on the covered testicle, since in that case the parietal and the visceral membrane of the scrotum are placed more immediately in a proper condition for adhesion; that is to say, in the most perfect relation with each other by the closure of the clams. This, however, is effected but more slowly when the operation is performed with the testicles uncovered.

In other respects the cicatrization of the wound proceeds, as in wounds generally, by the development of granulations which are secreted from the pus, and gradually produce, by means of that secretion, the gradual healing of the part, and the approach of the divided portion of the scrotum.

An essential condition of the primitive adhesion which is effected at the bottom of the wound, is that the inflammation which presides over that adhesion shall be moderate. If this inflammation is too intense, the fluid exhaled from the surface of the serous membrane approaches to the character of pus in its properties, and consequently has little tendency to the produce of organization. The testicular cord then remaining in every part isolated at the centre of the wound, develops itself, becomes voluminous, and the protuberances at its extremity, which contract no adhesion with those of the surrounding tissues, do not delay, by the great bulk which they acquire, to constitute a pathological state designated by the name of *champignon*.

This we believe to be the cause of the singular transformation which the spermatic cord undergoes in some cases after castration. We have had experimental proof of this.

The castration being effected, whether in the covered or uncovered way does not matter, if, when the wound is in its natural state of cicatrization the finger is introduced to the bottom of it,

and by a circular movement round the cord the adhesion which its surface has contracted with the parietes of the scrotum is destroyed, we are sure to produce tumefaction of the spermatic cord, and induration and vegetation of its extremity.

Then we draw the following conclusions from this anatomical study of the progress of wounds. These conclusions will not be novel to practitioners, but they will have the advantage of proving that their practice is in perfect accordance with theory.

1. *In ordinary cases*, in order to destroy the circulation in the spermatic cord, nothing more is needed than *simple compression*, either by means of the ligature or clams. The escharotics that are sometimes placed in the groove of the clams may induce the inconvenience of exciting too great a degree of inflammation of the serous membrane.

2. After the operation we should leave the wounds to pursue their own course towards cicatrization. We should refrain from injecting irritant fluids into them for the supposed purpose of cleansing them, unless there are evident indications of their necessity; and we should especially refrain from unnecessarily introducing our fingers into the wounds in order to explore them. All these are proceedings which often interrupt the natural progress of cicatrization, and may produce the serious consequence of isolating the cord, and producing vegetations on its extremity.

*Rec. de Med. Vét., Sept. 1840.*

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## A CASE OF PUERPERAL FEVER.

*By Mr. W. THACKER, Veterinary Student.*

THE following case of that sadly fatal malady attacking cows after parturition, termed *Puerperal Fever*, has lately occurred in the practice of Mr. Simonds, with whom I am at present residing as assistant; and thinking it might not be unworthy a place in the pages of your excellent Journal, I have ventured to send it for insertion. It is illustrative of the views entertained at this time by many members of the veterinary profession—that this disease essentially consists of an abnormal condition of the “*primum mobile*” of the animal machine—the brain, with its continuation the spinal marrow.

The patient was a valuable cow of the short-horned breed, in good condition, aged about six years, and the property of a gentleman in this place. Great care and attention had been paid to her, she being allowed the range of a park during the day, and



at night occupying a large straw yard. I am likewise informed that at the three previous calvings—this being her fourth—no indication of any deviation from a state of health had been observed; and that this fœtus was smaller than her former ones, and was brought forth, without any unusual difficulty, about eleven o'clock A.M. on the 14th instant.

During the remaining part of that day, and until seven o'clock on the following morning, no appearance of ill health was observed, she continuing to eat, and ruminating, &c. Her diet consisted of hay, bran-mashes, and gruel.

Almost immediately after partaking of a portion of the latter, she was observed, in attempting to turn towards the calf, to have partially lost the voluntary power over the muscles of the hind quarters. This was at first attributed to weakness, and more gruel was therefore administered; but, shortly afterwards, when again attempting to move, she staggered, and fell violently forward. The owner then becoming alarmed, requested Mr. Simonds' attendance.

On arriving at the cow-house, she lying on the ground unable to rise, we immediately recognised the symptoms that accompany puerperal fever. The pulse was upwards of 70, but not of such a character as to warrant the abstraction of blood; the respiration was laboured and difficult; the appetite lost, and rumination entirely suspended; the extremities, and in fact the whole surface of the body, was cold, and the bowels torpid, with suspension of the secretions and excretions. There was a peculiar champing of the lower jaw, similar to its action in rumination, accompanied by a discharge of frothy saliva; and there were occasional eructations of gas from the stomachs, although little hove was present. She was perfectly sensible, but, at times, uttered a suppressed moan indicative of her sufferings. After several ineffectual efforts, she succeeded in rising; but no sooner was it accomplished than she again staggered and fell.

*Treatment.*—A powerful purgative, combined with a diffusible stimulant, was immediately administered. A stimulating embrocation, with friction, was also applied to the whole course of the vertebræ, in order to restore the circulation through the vessels of the skin, and an enema was injected for the purpose of removing what faeces might be lodged in the rectum.

Mr. Simonds being compelled to attend to other professional engagements, I remained some time with the patient without perceiving any farther excitement in the system; the pulse still remaining about 70 in number, and without alteration in character. In this state she was left, with directions to be kept perfectly quiet, and she was so packed with straw that she might lie

upon her abdomen, in order to prevent the functions of digestion being interfered with. A dose of the aromatic spirit of ammonia was directed to be given should any disengagement of gas take place from the contents of the rumen.

On my second visit, three hours afterwards, I found the cow dead, the symptoms having gradually increased in severity. Previous to death she had become completely comatose or insensible.

The whole duration of the disease was but nine hours. Finding, therefore, that the case had terminated as most cases of the same description do that come under the notice of the veterinary surgeon, we commenced a post-mortem examination, and found not only sufficient cause for death, but enough to convince even the sceptical of the real seat of this disease.

On laying open the abdomen, the peritoneal covering of the viscera was free from inflammation; the internal tunic of the uterus was in the same condition as it is invariably found so shortly after parturition, being highly vascular, with a full development of the cotyledons; the kidneys, bladder, liver, and spleen were healthy; the stomachs perfectly normal in their structure, but the contents of the rumen were in a state of fermentation from functional derangement. On exposing the contents of the thorax, the lungs were found congested in a slight degree; but the heart, &c. was healthy. In order to bring the spinal marrow fully into view, a section of the vertebræ was made. The cord, in its course through the lumbar vertebræ, was somewhat softer than natural, with injection of the vessels. This considerably increased in the dorsal division, and, at that part occupying the space from about the third to the seventh dorsal, the theca was completely filled with extravasated blood from a rupture of some of its vessels; thus proving beyond disputation that those who consider this malady as one of the spinal marrow entertain a true view of its nature.

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## THE VETERINARIAN, MAY 1, 1841.

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*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

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THE Editor is requested to insert the following paragraph:—

“At a special general meeting of the Standing Committee of Veterinary Surgeons, held at the Imperial Hotel, Covent Garden,

April 15, 1841, Mr. Francis King, jun., of Stanmore, was appointed Treasurer; and the following gentlemen elected as a Subcommittee of Finance, with power to take such measures for raising farther subscriptions as they may deem desirable:—Mr. Thomas Turner, of Croydon; Mr. W. Field, of Oxford Street; and the Treasurer.

“At the same meeting it was stated by the Secretary that the subscriptions at present amounted to £206..14..6, of which he had received £93..8..0.”

Those of the friends of our art whose promised subscriptions have not yet reached the Treasurer will, we have no doubt, forward them by some early convenience; and many others will be induced to contribute their mite towards the furtherance of so good a cause.

It is a point of duty, to which the Editor somewhat reluctantly submits, to say nothing at present of the progress that is making. Our committee is composed of good men and true—men universally respected in and out of their profession. At the fitting and proper time they will give us an account of their proceedings.

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## REVIEW.

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Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

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*The Natural History of South Devon.* By J. C. BELLAMY, Surgeon, one of the Curators of the Devon and Cornwall Natural History Society. Jenkin Thomas, Plymouth; Simpkin, Marshall & Co. London.

IT is a most important and pleasing department of the human intellect to employ itself in seeking out the laws and designs of nature relative to her productions, and to solace itself in framing generalizations of a more or less artificial kind, relating to such portions of creation as may from time to time be examined by it. In our search, however, after these great truths, we soon dis-



cover that, to arrive at them, we must apply ourselves to the whole range of human learning. To secure these desiderata firmly in our grasp we must engage in inquiries both abstruse and intricate, and devote as large a portion of attention to the lower classes of God's great family as to its higher and intellectual members; and then we find, to our astonishment, that subjects which had been but little noticed by us contribute most influential matter to our deliberations while occupied in the absorbing scrutiny.

In our examination of the structure and functions of living beings, we necessarily find the operations of several natural laws extended to each of them. By attention and careful consideration we ascertain the phenomena induced by each separate law, and note the connexions or the characters of these results. Carrying these data and conclusions with us, we finally learn to anticipate and expect laws on any new subject of examination from an observation of their structure and functions—the functions of living beings being themselves in great measure united, the laws by which they act must be also, in greater or less degree, in unison, mutually dependant and reciprocally illustrative of each other, wherever found. In this way is it shewn how the laws of life in one series of beings illustrate and imply those of others, and accordingly how essential is the study of every department of organic life to the perfect knowledge of the physiology of one.

The author of the Natural History of South Devon is every way calculated for such an inquiry, having a thorough acquaintance with the localities of the district he describes, an intimate acquaintance with the Great Book of Nature, and bringing to bear on the whole no ordinary anatomical and physiological ability.

No portion of the world has enjoyed greater celebrity for a happy union of all that delights the eye than England; and no part of our island has received more marked distinction, on account of the peculiar junction of every sort of scenery, than Devonshire. The author first takes a hasty glance at these scenic characters of its southern districts, comprehending Dartmoor, towards the centre of the county, and the coasts which occupy the southern limits; and these examinations extend to three opposite kinds of scenery,—the *first*, mountainous, bold and romantic, desolate and bold; the *second*, wooded, greatly intersected by rivers, hilly, rich in pasturage, and highly fruitful; the *third*, bold, but sometimes soft and gentle, and at others grand and terrible, generally precipitate and barren.

From these differences in the physical condition of South

Devon, greater difference in its *fauna* from that of a spot not so affected may be anticipated. We refer our readers to the work itself for the list of the animals of South Devon, with their habitats. Of mammals, we have 43—*five* of the species belong peculiarly to Devon. Of birds, we have 247—*three*, or probably *four*, of which have as yet been noticed only in this district. Of fishes, forming a part of Devon's fauna, there are 110; the total of those limited to Devon and Cornwall, conjointly, are 41. Of land and fresh-water shells we have about 56—*four species* of the division of the molluscs seem to be limited to this district, while of the marine molluscous animals, usually termed shellfish, we have about 250; and the total of these species peculiar to South Devon shores, or, in some few cases, common to the shores of Devon and Cornwall, 55. Of the radiata, we have about 120.

It will thus be seen that the county of Devon yields to none in the importance of its *fauna*; and this is chiefly owing to its peculiar physical condition, in possessing a combination of scenic beauties; for in the mountainous, the sober, the tranquil, the bold, and the marvellous does Devon outvie Scotland, and even the more interesting and delightful of the midland English counties.

Alluding to the geographical distribution of animals in general, and particularly on the zoological geography of South Devon, the author is particularly happy. He considers that there are two sets of laws in operation on the geography of animals,—*primary* and *secondary*. The primary law, on which the distribution of animals depends, having a pretty general influence, and which seems, indeed, altogether in unison with the aggregate of our zoological knowledge, is "the gradual failure in numbers of individuals of a given species, as we recede from the point which, from their comparative plenty there, we presume to be their principal seat. Together with the numerical failure, we see likewise, as might easily be conceived, a failure or deterioration in size, in qualities, in colour, and in all other endowments;" and to so great an extent is this occasionally carried, that naturalists are frequently at variance in their decisions on the species, some considering such specimens as deteriorations, others naming them as separate species, or, at least, as formal varieties. It is seen that, independently of distance from the seat of luxurious growth and great numerical increase, specimens having all the appearance of such as are found at the very verge of the geographical range of a species are constantly detected within short distances. The author considers these primary causes as quite unknown to us, and likely to continue so, though it would appear that the various parts of the



organized creation being ordained to counterbalance each other, as the laws of dependence pervade the world of living beings in all its parts, any determination or regulation such as the one mentioned—the diminution of numbers, and deterioration in size and qualities of individuals—provided it were general, and observed in all classes and species, need not excite surprise.

The *secondary causes*, according to our author, are “*temperature, food, situation*, and the hostility of other species.” “The influence of these appears to be very considerable; and though we cannot be altogether warranted in attributing the above-named circumstances of diminution in number and deterioration in size, &c. to these causes, however plausible it might seem to do so, they are undoubtedly the agents that cause deterioration generally.”

The author then illustrates these remarks by examples from South Devon, and other places. Of the first of these secondary causes or influences ranking as laws of geographic distribution of animals which he mentions is climate, a term which includes a consideration of temperature, of seasons, of winds usually prevalent, of the dryness or humidity of the air, of rain, drought, continued cold or heat, &c. It deserves notice, that the presence of mountains, rivers, seas, barren spots, the quality of soil, the degree of cultivation, and the clearness or cloudiness of the sky, have all some influence in forming the climate, and, in consequence, the fauna of a country. Secondary laws seem to act and re-act largely on each other, so that no one of them appears to have a separate or unmixed influence on animal distribution. Thus the animal part of the creation is almost entirely dependent on the vegetable world, whilst the vegetable kingdom, in its turn, is dependent on inorganic matter, temperature, &c. Taking Dartmoor as an example, he says, “Its central districts present to the eye a series of hills of great size, covered with detached blocks of granite. On the summit of many of these hills are found swamps, and even pools, of great depth, and between them streams pass on for future coalescence; and where the surface is level for a sufficient space, the drainings of the country rest and form morasses and lakes.

“The flora of this wild district consists, with but few exceptions, of the lower tribes, such as mosses, ferns, lichens, &c., and of such plants as are peculiar to marshes and other collections of water. The soil cannot possibly support many of the higher orders; but the beauty, variety and luxuriance of those vegetable forms which mantle the rude blocks of granite, spring from the spongy soil of the bogs and marshes, or, maintaining their existence in the body of the current attached to some fixed



point, move in conformity with its undulations, are sufficient to attract the notice even of the incurious. In this sterile spot the most common creature excites regard ; and those which are peculiarly its own cannot fail to be contemplated with much interest."

The present state of Dartmoor would by no means lead to the belief of its supporting more than two or three quadrupeds of the smaller kind, such as the rabbit, mole, weasel, and stoat ; but, if we may believe the author, they were formerly exceedingly numerous, such as the wolf, the brown bear, the boar, the wild ox, the red deer, the elk, and the wild cat and the goat ; " there being undeniable evidence," he says, " that the central department of Dartmoor was in former years a forest, and that it was set apart for the king's use as a royal chase. The wolf appears to have become extinct in Dartmoor about the close of the reign of Elizabeth ; it was a pure native of our country, and required great exertions for its removal. The bear seems to have been extirpated in the eleventh century ; the boar and wild ox have been taken under the protection of man, and the date of extirpation of the wild stock is not recorded. That noble animal, the red deer, was, until within the last fifty years, pretty common in the remote wooded districts of the county ; its race, too, has undergone extirpation in a very gradual manner.

" But other animals than these once ranged the woods and forests of Devon, inhabited its lakes and rivers, and raced over its plains ; for there have been discovered, in caves of limestone in South Devon, remains of the tiger, hyæna, elephant, rhinoceros, and hippopotamus, in company with those of the horse, ox, sheep, pig, wolf, bear, and deer. The four stations at which these fossiliferous caverns occur are, Oreston, Yealmpton, Berry Head, and Torquay ; and their perfect similarity to those of other caves in different parts of England and the continent establishes their identification with the series,—a series exhibiting a probability that, at the period when these animals inhabited Devonshire, circumstances were in a great measure different to those now present, since they seem to have been unsuited to the existence of a vast variety of beings now constituting the natural products of the warmest portions of our globe. The elephant would need forest tracts ; the rhinoceros, marshy lands of some extent ; and the hippopotamus large lakes, or deep and capacious rivers ; morasses, jungles, and extensive shelter, would be required for the accommodation of tigers, hyænas, boars, wolves, &c., and plains for the horse and peaceful ruminants."

Our readers will recollect our remarks on the subject, " on the Geological History of the Horse," in the January and February

numbers of *THE VETERINARIAN* of this year, and in which we quoted the opinion of Mr. Saull, that, in the northern and southern hemisphere there has been an alternate increase and diminution of waters in successive periods of 25,800 years, corresponding with the cycle of the precession of the equinoxes, and resulting from the same cause, viz., a perpetual change in the situation of the earth's poles. Mr. Bellamy appears perfectly aware that the climate of England, at the period when these ferocious animals existed here, must have been widely different from the present; but he leaves the question where he found it. We refer him to Mr. Saull's pamphlet.

We conclude our review by recommending the perusal of Mr. Bellamy's book to all those who wish to become acquainted with

“Lovely Devon, land of flowers and song!”

who would learn the physical history of her granitic tors and grequacke hills, her fossiliferous slates and breccial caves; for here Nature unfolds “her hoarded poetry and her hidden spells.”

K.

## VETERINARY JURISPRUDENCE.

### CRIPPS *v.* SMYTH.

[THIS trial is inserted, not in illustration of any case of veterinary practice, but for a reason which will presently be apparent.—Y.]

IT was an action to recover the amount of a bill of exchange for £150, the price of a horse. The bill was produced; proof was given of directions to send the horse from Limerick to Manchester, and of the horse being forwarded agreeably to the order.

The plaintiff was one of the aldermen of Limerick; the defendant was a captain in the 6th Carabineers. The horse was soon returned from Manchester as being unsound, and when the bill became due payment of it was refused on account of this alleged unsoundness.

These facts having been proved, the counsel for the defendant indulged in some comparatively harmless, and yet, perhaps, not quite justifiable pleasantry, with regard to the double function which the plaintiff seemed to discharge; viz., that of alderman

and horse dealer, and stated that, the horse, not being by any means what he was represented to have been, was returned to the plaintiff at Limerick, who refused to accept him. He was then put up at a livery-stable, and sold, some time after, for the sum of £45. He would call several veterinary surgeons, who would give a strange and almost incredible account of the defects of this horse, and then he might safely appeal to them whether the sum demanded by the plaintiff should be paid. He would call his witnesses:—

*Henry Mitchell Smyth*, Esq., was brother to the defendant: had heard of this horse, and went to Mr. Cripps's stables to look at him, for his brother wanted to purchase. The horse was out at exercise, and he waited until he came in. He walked round the horse and looked him over, and said that he was a nice, good-looking horse. He asked Mr. Cripps to let him get on him and ride him. Mr. Cripps replied that the horse had got an over-reach, but that when he was well he might ride him. Mr. Cripps said that the horse was six years old, got by Irishman, and that he would warrant him sound; but was willing to submit him to the opinion of a veterinary surgeon. Witness replied, that if he was dealing for himself he should be perfectly satisfied; but he was commissioned by his brother to look for a horse, and he thought this would suit him. In the meantime the horse had been put into the stable. The witness asked the servant to turn the horse round, that he might examine his mouth. He was turned round, but the horse would not let him open his mouth. Mr. Cripps said that the horse, probably, imagined that they were about to give him physic. He (Mr. Cripps) would open the mouth, and did so; and observed, that the horse was but six years old. The witness remarked, that these were the oldest six-year-old teeth he had ever looked at. Mr. Cripps asked £200 for him. Witness said that the price was too much, but he would write to his brother if he would warrant him sound. Mr. Cripps said that he was a sound and good constitutioned horse. He wrote to his brother; a correspondence commenced between his brother and Mr. Cripps. He never saw the horse hunted; he never saw him out of the stable again; but the result was, that his brother bought the horse.

*Patrick Anglim* is a helper in Conway's livery stables, in Cork. He has been always about horses. He was sent for to Paris's yard to take charge of a valuable horse to Cork. He got on his back and rode him out, and he went very well for a short time, and then the horse suddenly stopped. He turned back to Mr. Cripps's stable with him; but Mr. Cripps said that, having once left his stable, he should never enter it again. He told Mr.



Cripps that he had seen him sulk, and that he did not like to undertake bringing him to Cork. He was not desired to take the horse to Mr. Paris's, or to any other veterinary surgeon; but Mr. Cripps put his own man upon his back, telling him to slacken the rein a little when he stopped and he would go on again. Mr. Cripps's servant rode him as far as Bruff, and he rode a hack, and the horse went very well then, except for his stumbling, when it was necessary to check him. After this they were compelled to let him alone until he would go on of his own accord. He noticed in Paris's yard that the horse was groggy or shaky on his fore legs, but he did not examine his eyes. He took two days to bring him to Cork, and he thought it seven years, until he was out of his hands, he had got such a caution about him. He brought the horse in good condition to Cork.

*W. Noonan* lives in Cork, in Conway's Bazaar—he is head ostler there—he saw Anglim ride the horse into the yard—the animal appeared to have been ridden carefully. He observed to Anglim that it was not possible so much money could have been given for the horse, as he was shaky on his legs. He rode the horse to the packet next day. He stumbled frequently, and sulked. He examined his mouth: it was one of about nine or ten years. The off eye was much clouded—it was not a sound one.

*Cross-examined.*—Has often seen a good hunter that was not able to go well over a paved street. He could not tell a horse's age after eight: would know a 15-year old horse from one that was nine or ten years old.

*George Turner.*—Is servant to Captain Smyth: was sent to Liverpool to fetch a horse that was coming from Ireland—led him to the rail-road station, and came with him to Manchester. There was no blemish on him from the journey. He had bad fore legs, and seemed very shaky on them, and he had bad thrushes. They were of some standing. He had rather a flat foot and narrow heels. When witness tried to water him on one side he could not see the water; but when he put it on the other side he began to drink. He took the horse back to Mr. Cripps, at Limerick, on the 22d of May. He would not take in the horse, but he put a paper in his pocket which witness gave to him. The horse was then put up at Swinburn's, and he got a receipt for him there.

*James Hollingworth.*—Has been in practice as a veterinary surgeon in Manchester for thirty years, and has extensive practice there. Turner and Captain Smyth brought a chestnut stallion to be examined by him. The feet were contracted, and he had thrushes. It was a disease of more than six months' standing. They were confirmed thrushes. He examined the horse's eyes.

One had a chronic cataract. It was clouded on the lens. It might escape the eye of an inexperienced person. Thrushes would cause stumbling. He was not a sound horse. He examined his teeth—he was eight or nine years old. He went very lame in moving, owing to the contraction of his feet by the thrushes.

*Cross-examined.*—A cataract is an opacity of the lens. There are two kinds of cataracts—they may be small or large. A small cataract does not entirely obstruct the rays of light: a large one generally does. There are two kinds of thrushes—an unsound one, and one that may be consistent with soundness. There is a running thrush—that is always an unsound one. Standing in moisture would often cause a thrush. The thrushes of this horse were unsound. A horse may appear to be perfectly sound, and eight days afterwards thrushes may appear.

*Thomas Brown.*—Is a veterinary surgeon, and has belonged to the Carabineers seven years. It is his duty to inspect the horses of the regiment. He inspected a chestnut stallion belonging to Captain Smyth. The feet were not sound—he had contraction and thrushes. The thrushes were not of recent date. He had also cataract.

*Cross-examined.*—Cataract is not curable. If it was mechanically removed, that would do no good, for he must wear spectacles, in order to have perfect vision, and no one could tell what lens would suit him. A simple speck on the eye was readily distinguished from cataract.

*John Watts*, a veterinary surgeon, residing in Limerick, inspected a stallion at Swinburn's, at the request of Capt. Smyth. There was a cataract on the off eye. Cannot say how long it had existed, it might have been formed in a month or six weeks. The horse had some sight in the eye. His feet had thrushes. These constituted unsoundness. The horse was more than seven years old.

*Cross-examined.*—He recommended Mr. Smyth to purchase the horse. His feet are now perfectly well; in fact, he is as sound as any horse in Limerick, with the exception of the eye.

*James Rourke* knew the stallion—remembers his having been trained by Mr. Maher. He was three years old when he was training in 1834. He got an injury in the eye while he was training.

Mr. HENN addressed the jury for the plaintiff. He lamented that the learned counsel for the defendant had been instructed to speak harshly of the plaintiff, an example which he did not mean to follow. He would content himself with proving, from the letters which passed between the parties, that there was no war-

ranty of the horse, or contract for a warranty; and even if there were, a breach of it would be no defence in this action, it being brought upon a specific security given by the defendant for the price of the horse. Nothing but the existence of express fraud could vitiate the matter. As to the opinions of the veterinary surgeons, they came too late. Mr. Cripps had consented that the horse should be examined by competent persons before the bargain was closed; but that not being done, the plaintiff had no right afterwards to complain. Then, as to the account which had been given of the unsoundness of the horse, he considered that of no importance. Every one knew the hard swearing in most cases of this kind, and he had no doubt that he could easily have obtained an equal number of veterinary surgeons who would have sworn any thing. One thing was certain, that Mr. Cripps was willing to have him examined by any veterinary surgeon in Limerick; but, after he had been taken from Limerick, he, very properly, would have nothing more to do with him. The horse was taken away without a warranty. Captain Irvine, who, in the after-state of the negotiation, acted for Captain Smyth, did not demand a warranty, and had no instructions to do so.

The learned Judge was of the same opinion. The plaintiff had received a certain bill of exchange from the defendant; fraud only could vitiate the security, and that fraud had not been proved.

The Jury found a verdict for the plaintiff of £156..15s. damages, and 6*d.* costs.

[A very proper verdict, under all the circumstances, this seems to have been; but the proceedings before the actual sale of the horse are singularly strange. Mr. Cripps was certainly aware of the defects of the horse, and, perhaps, should have been somewhat communicative about them. He does, however, offer him to the examination of any veterinary surgeon before he was taken from Limerick. Captain Smyth's brother saw that the horse had over-reach, and that he was older than Mr. Cripps said that he was. Captain Irvine came over expressly to arrange about the horse, and was warned by Cripps himself not to take away the horse until he was satisfied about him, for, after having once left his stable, he would never take him back again. The veterinary surgeon of the Carabineers said that he had contraction and thrushes and cataract, and yet he is bought without a warranty. With all this, however, we have nothing to do. Our present business is with the counsel of the plaintiff, who, in reply to the straightforward evidence of Messrs. Hollingsworth, Browne, and Watts, said (at least we are so informed), that, "he could bring double the number of veterinary surgeons to swear any thing."



We will not ask in which profession an adherence to truth is most likely to be found, one in which it is the duty of its members to guard their employers from imposition and fraud, or another whose business and whose triumph it occasionally is to make the worse appear the better argument; but we tell that gentleman, that although the nature and the duties of our profession place many of us in a station of life somewhat inferior to him, there are those among us, and their numbers are rapidly increasing, who will not yield to Mr. Henn, or any of his brethren, in scientific attainments, gentlemanly conduct, or honourable feeling.—Y.]

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[The following application to the Court of Exchequer possesses some interest. We are much inclined somewhat to differ from the learned Judge. Some of our readers will probably favour us with their opinion.—Y.]

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COURT OF EXCHEQUER, Tuesday, April 20.

(*Sittings in Banco before Lord ABINGER.*)

BROWN *v.* ELKIN.

*Mr. Balguy* moved, in this case, for a new trial. The plaintiff is a veterinary surgeon, and brought this action to recover the value of a hunter, sold to him by the defendant for 60 guineas, with a warranty. It appeared that at the sale the plaintiff gave his opinion that the hocks of the animal were suspicious; on which the defendant said, "Oh, I will warrant him sound." The plaintiff then said, "Why, he has been sold already, and returned to you." To which the defendant replied, "Yes, he was returned, but for being restiff, not for any unsoundness." On this assurance the plaintiff bought the horse, which, after hunting three times, threw out a curb. This, however, being reduced through the united effects of the long frost and fomentations, the plaintiff hunted him the fourth time, when he again became lame, and, being sold as unsound, this action was brought to recover the loss sustained thereby. At the trial it was proved that the horse had been, in fact, returned by the purchaser alluded to in consequence of the suspicious character of his hocks, which the plaintiff himself remarked; but a veterinary surgeon, who was called to prove his unsoundness, said, in answer to a question from Lord Abinger, who tried the cause, that "curby hocks" were not in themselves an unsoundness, though they were proof of a liability and tendency to unsoundness, and were a sufficient defect to warrant the return of any animal. In consequence of this his Lordship intimated to the Jury that the sole question being, whether the horse was unsound at the time of the sale—

proof of liability to become unsound was not enough ; whereupon the Jury found for the defendant. This finding the counsel for the plaintiff now sought to reverse, contending that too much weight had been given to this part of the evidence by the learned Judge.

The Court, however, agreed with his Lordship. Both the parties knew of this tendency to unsoundness, and as the plaintiff was a veterinary surgeon himself, he ought to have taken a different warranty. What the defendant said was, that the horse was then sound ; and so the witnesses say he was, though he became unsound afterwards.—Rule refused.

[The Editor will feel exceedingly obliged to any gentleman who will kindly give him an account of the action brought by the authorities of the Metropolitan Police against — Thurtle, for bringing into Smithfield market certain cattle dangerously affected with the prevailing epizootic. The previous examination of the case before the presiding magistrate would be valuable ; but the after-proceedings are what the Editor is chiefly solicitous to obtain.]

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We stop the press to insert the following account of the Examination of the pupils of Mr. Dick's school :—

### EDINBURGH VETERINARY COLLEGE.

THE annual examination of the students of this Institution for their diplomas took place on Monday and Tuesday last, the 19th and 20th of April, in Clyde Street Hall, in presence of the Convener of the Veterinary Committee, and a number of the Directors of the Highland and Agricultural Society of Scotland.

The examinations were conducted by Sir George Ballingall, Sir Charles Bell, Sir William Newbigging, Dr. Gillespie, Dr. Borthwick, Professor Lizars, Professor Reid, Dr. Mercer, Dr. Dumbreck, Mr. James Millar, surgeon, Professor Dick, and Mr. Dycer, veterinary surgeon, Dublin. There were also present, Dr. Halket, staff surgeon, Mr. Skae, lecturer on medical jurisprudence, and Drs. Foote and Dane of the 29th regiment.

The following gentlemen were then found duly qualified, and obtained diplomas accordingly :

Alexander Murray Aitken, Edinburgh ; John Thomson, Dundee ; Robert H. Glover, Dumfries ; Alexander Amos, Gour Bridge ; John Aitken, Duddingston ; William Dycer, Dublin ; John Briggs, Aberdeen ; James Kirkham, Liverpool ; William Smith, Perthshire ; Charles Fraser, Limerick ; Charles Forbes, Aberdeenshire ; William Mechie, Berwickshire ; Mark Monkman, Leeds ; William Henderson, Roxburghshire ; Thomas Swarbrick, Lancashire ; Charles Abbot, Manchester ; John Couch Quick, Cornwall.

The students were minutely examined as to their knowledge of the anatomy and structure of the horse, and also the diseases to which the domesticated animals are liable, and the practical treatment of the same. The examiners expressed themselves highly satisfied with the proficiency and extent of knowledge of the several candidates.

Professor Dick gives prizes to the student who passes the first examination, and also to the one who produces the best anatomical preparation. The judges of the anatomical preparations (Professor Lizars and Dr. Mercer) awarded the prize to Mr. Kirkham. But that respecting the best examination was not so easily decided. There were three gentlemen who, after the first examination, were considered to be so equal that they were subjected to a second, which by request was conducted by Dr. Mercer, but who, after a most searching series of interrogatories, still declared his inability to prefer one to the other, because each candidate had answered every question put to him. They were again examined by Professor Dick; but, even after this third trial, their merits were so equal, and their knowledge of the most difficult parts of anatomy so very accurate, that the Directors of the Highland and Agricultural Society who were present, agreed, on the part of the Society, in the peculiar circumstances of the case, to award two additional medals. The three following gentlemen, among whom the contest had lain, were then declared equal in merit, and obtained medals accordingly: viz. Mr. Charles Fraser, Mr. Thomas Swarbrick, and Mr. John Couch Quick.

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#### ACCOUNT OF THE LATE ENZOOTIC ENTERITIS AMONG HORSES IN PARIS.

[A short sketch of this complaint may be interesting, as connected or contrasted with the present prevailing epidemic in various parts of Great Britain.]

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DURING the months of June and July there appeared, in Paris and its environs, a disease among horses much resembling that which broke out in 1825. At the commencement the horses were unusually dull, and soon became altogether dissipated. They back as far as the halter would permit while in the stable, and hung could scarcely be induced to touch either solid or liquid food.

The conjunctiva was deeply injected; the tumefied pupils covered part of the globe of the eye, and by pressure with the fingers permitted a considerable quantity of limpid serosity to escape.



The vertebral column was exceedingly tender from the withers to the rump. The animal shrunk to the very ground if the slightest pressure was made on these parts. The mouth was clammy, and somewhat injected; the pellets of dung were small and dry, or sometimes covered with mucus. The respiratory movements were scarcely disturbed; the circulation was considerably affected; and the pulse was hard, and varying from 60 to 70 in a minute.

Soon afterwards the legs became very much swelled, and he walked with considerable difficulty. When some of them were creeping about it would have been thought that they were foundered.

At the close of the disease diarrhœa supervened, and then, little by little, every symptom became relieved; and in from ten to fifteen days the majority of them had returned to perfect health.

In some of them, however, there were very serious complications with pneumonia, the inflammation of which was extensive, and somewhat obstinate.

*Treatment.*—At the commencement the horse was bled to from six to ten pounds, according to the state and constitution of the animal. Emollient and slightly laxative drenches were administered. Very little food was allowed, and that consisted chiefly of mash and gruel. Some injections were administered. The back and loins were warmly clothed. Dry and gentle friction was used. A little exercise in the sun, and under a good shelter, was allowed.

Of our patients, not one was lost.

MM. RENAULT AND BOULEY.

## ON THE TREATMENT OF CAPPED HOCK.

*By M. ROUELLE, M.V., Hérouvillette.*

ON the 22d of January, 1836, I was consulted respecting a mare, four years old, that had a capped hock. A little after the commencement of the swelling it was not larger than a pullet's egg; but, whether by the inconsiderate application of too irritating ointments, or fresh contusions by kicking against a door behind her, it became double its original size, and was very tender, hard, and hot. I ordered a linseed-meal poultice to be applied every day.

30th.—The skin was thinner on the inside of the hock, and I thought that I could detect some fluctuation; and thinking that the resolution of the tumour would be difficult and tedious, I plunged my lancet into it. There rushed out some ounces of fluid, which I recognized as synovia, mingled with a red serosity. I

perceived that I had opened the sheath of the tendon, and that I had exposed myself to very serious results. That which I had feared, in truth, arrived, through the utter neglect of my orders. I had desired that a thick pledget of tow should be placed over the incision, and confined in its situation by a long bandage tightly enveloping the hock. In the course of the following night this fell off, and was not replaced until the afternoon of the next day.

*Feb. 1st.*—The hock was now very much swelled. I told the proprietor that, from the distance between us, I could only attend on my patient occasionally, and that his only hope of saving the mare lay in following exactly my directions. A portion of air had introduced itself into the synovial sheath, and thence resulted an emphysematous œdema of the whole limb for the space of three days.

*4th.*—The engorgement still continued to increase. The sensibility of the part was extreme, the animal could not rest in the slightest degree on that leg—the mare was quite out of spirits, and refused altogether to eat. My colleague and friend, M. Pouchy, met me in consultation. He attributed the increase of every unfavourable circumstance to the presence of air in the serous cavity which had been opened, and we determined to continue the practice which had been adopted, with the addition of the following lotion:—

Lees of wine.....	4 pints
Vinegar.....	5 pints
Camphorated spirit.....	2 ounces

Foment the part well with this three times every day.

This treatment was continued until the synovial discharge was replaced by one of good pus; and it was not until this good supuration presented itself that we removed the bandage. The lotion was continued for a considerable period after this, and until there was a perfect cicatrization of the wound. The hock, however, retained its enlarged state three or four months, and then the tumour gradually yielded, and at length disappeared, under the influence of different stimulants.

# LIST OF GENTLEMEN WHO HAVE OBTAINED THEIR DIPLOMAS FROM THE ROYAL VETERINARY COLLEGE, LONDON.

*March 31, 1841.*

Mr. R. T. Wallis, Halsted, Essex.

— Isaac Gooch, Swainsthorp, Norfolk.

— William Litt, Whitehaven, Cumberland.

— George Cooke, Southwell, Nottinghamshire.

THE  
VETERINARIAN.

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VOL. XIV, No. 162.]

JUNE 1841.

[New Series, No. 102.

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THE PRESENT EPIDEMIC AMONG CATTLE, &c.

[The following Reply to the Queries of the Royal Agricultural Society of England was sent to the Chairman of that Society, by Mr. READ, V.S., of Crediton. With his consent a copy of it is here inserted. The Queries are to be found at p. 169 of the present volume.—Y.]

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*To Philip Pusey, Esq., M.P.*

Sir,—WITH pleasure I have endeavoured to reply to the queries for information to the best of my knowledge and judgment, in conformity with the circular received through your Secretary on the nature of the now existing epizootic amongst different kinds of stock.

1st. Yes.

2d. It has prevailed on a small farm of my own, distant two miles and a half from Crediton, the town in which I reside.

3d. It broke out on the 2d of January 1841, attacking five milch cows, extending to the sheep and swine.

4th. The farm is situate in Sandford, in the county of Devon.

5th. It partakes of both.

6th. Nearly the whole of the arable land is elevated, and, from the fields not being large, it is well screened by hedges thickly wooded; it is moderately dry; the pasture land is rather flat, with a tributary stream flowing through the marshes.

7th. The surface soil is what is commonly called land of a dun colour; the substratum chiefly clay.

8th. North-east and easterly winds, with frost, and, occasionally, sleet and snow.

9th. They had not.



10th. Nothing of the kind.

11th. They were housed ; in bare condition, feeding on straw and turnips : ages, young and old.

12th. No distinction.

13th. The first symptoms recognised were an issuing of ropy spume from the mouth ; there were no premonitory symptoms observable by the attendant.

14th. The mouths were chiefly infected, and the feet subsequently in the cows ; in sheep and pigs the feet were all diseased first, or their being lame first made it observable.

15th. No, there has not.

16th.

17th.

18th. Not very severe.

19th. They have been fed, and have continued to feed, on hay. When the frost was severe the turnips were steamed, or boiling water poured over them. The medical means used by me consisted in the exhibition of warm laxatives consisting of, for an ox, cow, or steer, four ounces of bruised Alicant aniseed, with sulphur, in doses of half a pound to one pound, administered in large potations of gruel. My object in bruising the seed is, that half the powder of the various carminative seeds purchased at wholesale vendors is spurious, or has lost its efficacy. One dose of this medicine is sufficient in most cases to excite the bowels ; or, if not, it is repeated in doses of half the quantity, until some purging is produced. I apply nothing either to the mouth or feet. Solutions of blue stone, or muriatic acid and tar, I have witnessed to be highly injurious. I have also derived many facts from the maltreatment of others. I had ten cows affected with the disease under treatment, feeding on straw and turnips : about 100 yards distant were five cows labouring under the same complaint. Those under my treatment had nothing applied to the feet or mouth. They did well in ten days ; the others had a solution of sulphate of copper and diluted muriatic acid applied to the excoriations on the tongue ; the consequence was, that their tongues swelled in every one of them, and they were more than three weeks in recovering. Again, the foot rot is very prevalent in my neighbourhood. Many, not aware of the disease, imagined that the lameness arose from it. They applied the usual remedies, which produced great irritation and pain, and considerably retarded the cure ; the feet of those sheep were longer recovering. As another proof, the disease began in some yearlings. The farmer imagined that they were lame in the feet between the claws, sent for the smith, and applied the usual caustic. It greatly aggravated the distemper. Eight more were taken ill. Nothing was applied to

the feet. They were well soon : the others remained lame for a long time. Nothing must be done to retard nature in vigorously developing the symptoms, either in the feet or mouth ; for the greater the distention of the cuticular coat of the tongue from effusion of serum underneath it, producing pouches either generally or partially on the tongue, palate, or lips, so much the sooner do the animals get well, and the feet also suffer less. I do not break the pouches of the tongue or lips. If they remain whole, the animal will continue feeding ; but if the coat is by accident torn off, as is often done by abruptly handling the tongue, the animal suffers much pain and refuses food. In some cases the fluid escapes by bursting from engorgement. This usually happens at the side of the tongue where the coat is thinnest. It also escapes from attrition in the act of manducation, either from pressure or from being punctured by the eatable substances. The lameness in the feet sometimes lasts only a few hours, more particularly in those animals in whom Nature has been profuse in establishing serous infiltration on the tongue and surrounding parts. The management adopted by me consisted in keeping the animals dry and warm, allowing the beast any thing he had a desire to eat. Our cattle, from scarcity of provender, are in low order. I have not had recourse to bleeding, in either fat or lean stock. I have invariably observed that, as soon as the secretions of the bowels are increased by the action of carminatives, and such laxatives as determine to or increase the secretions of the skin, the disease is at once arrested. For this purpose sulphur in proportionate doses, conjoined with aromatics, has proved I may almost say a specific.

The outrageous doses of salts administered by some have done injury, by inducing a debile state of the animal. I avoid the application of poultices to the feet, or any kind of moisture—they induce suppuration, give pain, and prevent the union of the claws by adhesive inflammation. Wether sheep and barreners in my locality have all done well under this disease : but most devastating havoc has been made by its malign influence on the progeny of the parturient ewe. At this period of the year—with us the middle of our lambing season—the destructive ravages it has made are almost incalculable. One-half of the lambs dropped at present have died from the third or fourth day to as many weeks old. The ewes with the disease lamb well, and the lambkins seem thriving until the third day, when they begin to droop and, in a few hours, are dead. A listlessness comes over them and a general torpor, and they die in a comatose state, with, in some, an involuntary discharge of fæces and urine a little previously. I have also positive proof that the young lambs would

have died, had they not been suckled by a ewe with the disease at birth. Many have taken away the lambs after they are dropped, and before they had any opportunity of sucking the ewe. They have fed them with milk from the healthy cow and linseed infusion, yet they have died about the same time. Lambs also that have dropped from ewes not having the disease have died in the same manner. From this I have drawn the conclusion, that the milk of the ewe has poisoned the young ones in the first place; secondly, if they received it from a natural cause, they also die from the suppression of the disease, in consequence of the constitution not possessing sufficient vigour to allow it to develop itself either in the feet or mouth. I am now stating undeniable facts from actual observation; for in numerous cases, where the young animals, when only a few days old, have had the distemper in the feet or mouth, they have done well; but when the malady has not been externally visible they have died. Lambs dropped from those ewes not having the disease at their birth, die also if the distemper is among the flock.

My friend Mr. Hainwood, of Longbarn, an accurate observer, had a sow that farrowed and brought forth a litter of ten pigs. The sow at their birth had the epizootic. The little ones sucked, looked well, plump, and glossy, and full of their gambols, but on the fourth day seven died in a few hours. No premonitory symptoms were observed. On the fifth the remaining three died also.

I will now briefly describe the morbid appearances observable in many lambs examined by me and sent from the flocks of different farmers. The intestines, kidneys, and bladder, in fact the whole contents of the abdomen, were healthy. In some the lungs, costal pleura, as well as pulmonary pleura, had an unnatural sanguineous blush, and also the pericardium; but, in the majority of cases, the cerebral tunic was turgid, with an evident determination of blood to the brain, yet no effusion either in the ventricles or on the surface; the commencement of the spinal sheath was also blushed in some; but the most singular appearance was the milky white nebulosity of the crystalline lens of the eyes. In some of the lambs that died of the epizootic malady, commencing, on carefully examining the lens, a little before death, the humours of the eye are healthy and transparent, but the opacity is entirely confined to the crystalline lens of the eye. Reasoning from this symptom and those before described, it is a fair conclusion that, where the distemper is not fairly brought forward, the brain or its investment is the seat of the disease, either from its structure in young animals being more susceptible of the impression of the poison, or because they have not sufficient vigour to allow the disease to be brought out either in the feet or mouth.



I will now speak of a few experimental facts as adjuvants to the medical treatment described, and particularly bleeding. My friend, John Bodley, Esq., a member of the Royal Agricultural Society, had four valuable rams of the Leicester breed taken with the epizootic—its first appearance on his farm. They were in good condition. Their mouths were affected, and their feet also, accompanied by severe lameness, pain, and irritative fever. We bled two; the other two were not bled. The two that were bled did not recover any sooner, and Mr. Bodley, as well as myself, thought the cure in them was retarded. Lambs only from two to three days old I have also bled; but, after all, the disease has pursued its destructive course. Many calves also have died in my neighbourhood, from three to ten days old, from sucking their dams while affected with the epizootic.

20th. None of the horses have died under my own notice, nor have any, to my knowledge, from the influenza itself; but great loss has been sustained from injudicious treatment, viz., that of purgation while under the influence of the disease, which is, in most cases, a destructive poison.

*Cattle*.—Out of from 1000 to 1500 head of cattle none have died.

*Sheep*.—As I have before stated, of wether sheep and barreners none have died; but many deaths have arisen prior to and after the gestation of the ewe. I have examined many, and found their death ascribable to other causes, such as the effect of difficult parturition, old diseases of the lungs, &c. Farmers ascribe every thing now to the effect of the epizootic. Numerous have been the deaths from *ramollissement*, with granular degeneration of the liver, confined to the gestating ewe. Farmers with us call it the “dry caw.” The liver has a pale ash colour; the peritoneal coat is easily torn; and with the least pressure the finger can break down the substance of the liver. There is no effusion in the belly, and the rest of the viscera seem healthy. No abscesses or flukes are to be seen in the liver: but the bile-bladder is full, but of a pale colour. I do not think it has any thing to do with wet. We have had a very dry summer, and the sheep examined by me were on healthy sheep estates. I think it produced by the first shoot of young grass under the influence of locality of soil and manure. The ewes maintain a fair condition, but are rather listless, and frequently lie down. They do not mingle with the flock as usual, and suckle their lambs until within a short period of their death. Remedial means, none.

21st. In those cases where the udder was not affected, the milk has in some partially diminished; in others not at all. In from ten to eighteen days it again returned. In those where the

udder in one or more quarters was affected, the milk has returned also. None have been rendered impervious to the secretion or excretion.

22d. Cows and sheep during gestation or after parturition have not been exempted. It has gone through its usual course.

23d. Yes: in the mare, about the seventh day after the animal has had the disease the foal is aborted dead. No physic has been given to the mares, nor have the animals been bled.

24th. I have not seen any.

25th. I have not seen any before the third or fourth day.

26th. I am not decided in my opinion as to this point.

27th. Yes, it has.

28th. I have not seen any.

29th. In a fair disposition to improve. In both forms of the disease.

30th. On this question I shall make a few remarks:—The summer 1840, from the latter end of February to October, was very dry. As soon as the rain set in, which it did about the beginning of October, the influenza among horses developed itself, although but a few solitary cases had occurred in the interim since the year 1836. The prevailing wind was northerly and easterly: its course was not regular, but in a varied direction. Miles apart some intervening stable remaining free: in some stables it confined its influence to one or two horses; in others it ran through the whole. It is remarkable that, as soon as the snow mantled the ground, on reference to my statistical record, not a single fresh case occurred, but only from those stables that had been infested with the disease beforehand. From its abruptly ceasing, a fair conclusion may be drawn that the empoisoned emanation, which was capable of exerting its influence on the animal frame, was prevented from commingling with the atmosphere, and the means of infection suspended, and became more concentrated. Now comes the fact, extraordinary as it may appear, that as soon as the snow set in, horses were exempted, and, for the first time in my locality, it began to exert its infectious agency on cattle, sheep, and swine, as the thaw began, and is now on the increase. Now, whether the poison, from being imprisoned by the snow, became more malignant, or acquired any new component constituency, cannot be determined (should such poison be an evolution from the earth); for, as soon as the thaw commenced, and it became free, cattle, sheep, and swine were within two or three days attacked.

31st. I have here to note another singular incident (but it must be borne in mind that I am confining myself to my own locality, equidistantly seven miles, as near as I can imagine, from

the town in which I reside), that in those stables, and on those farms where the influenza had previously run its course amongst horses, I have not as yet had a single case of the epizootic with the other stock. On the other hand, on those very identical farms that are now under the disease, and have had the cattle epizootic, not one single horse has been affected with it.

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## RESPIRATION,

ITS MECHANISM AND CHARACTERS ABSTRACTEDLY CONSIDERED.

*By Mr. R. PRITCHARD, V.S., Wolverhampton.*

[Continued from page 205.]

THE impediments to free respiration in a healthy horse are affairs of the greatest importance, to the trainer of the race horse more especially; with the rider to hounds they are next in amount of consideration; and of considerable moment to every man that rides or drives fast. They consist of whatever obstructs or hinders the facile easy movement of the respiratory mechanism. First in magnitude is an accumulation of the adipose substance, and more particularly within the chest, beneath the serous tunic upon its internal walls, and about the base of the heart. Here this material seriously impedes respiration by diminishing the capacity or space of the pulmonary chambers and the expansion of the lungs. There is in the healthy condition of the heart ample room within the pericardium for all its motions; and, as the first act of the organ is to contract, the chamber is always efficient in space for the returning dilatation of its walls; therefore a deposit of fat about the base of the heart does not impede its movements by lessening the extent of the cavity of the sac, but by diminishing the rythm, more especially of the right auricle and ventricle. This being, as I before stated, the respiratory portion of the organ, an accumulation of fat interfering with the vibration of these cavities must impede the mechanism of respiration. A load of adipose substance, situated externally of the chest, is not only a burden upon the muscular fibres, but a dead weight upon the ribs to be moved by the inspiratory muscles. Whatever may be the apparent enlargement of the substance of the muscles in the fatted horse, not one fibre of the motor tissue is increased by such growth; it is wholly of inactive material. The accumulation of fat within the cavity of the abdomen, between the peritoneum and the fascia of the muscles—beneath the sur-



faces of the peritoneum generally, as in the omentum, mesentery, or intestines—is an inactive weight upon the expiratory muscles, and to be moved by their power of contractility. The blood in circulation may impede respiration by volume or quality; the composition of the blood is not a subject entering into the mechanism of respiration: suffice it to say, that whatever constituent or component lessens the power of self-repulsion in the particles of the blood, lessens its fluidity, and consequently requires a greater propelling power. If sanguineous plethora exists in the system, both the heart and the lungs must increase their action in force and frequency in order to effect the circulation. A load of ingesta in the stomach, or fæcal matter in the intestines, mechanically impedes respiration, by offering resistance to the contraction of the diaphragm in inspiration, and to the abdominal muscles in expiration.

The *characters* of respiration in health, in the quiescent state of the animal, consist of a regular, uniform, gentle, and easy movement of the flanks, belly, and ribs; a placid rising and falling of these parts, recurring in almost imperceptible succession, from four to eight times in a minute, and very nearly effected by the action of the diaphragm and the elasticity of the structures of the chest and lungs alone. By exercise these movements in the respiratory machine are increased in frequency and extent proportionate with the exertion of the animal, whether arising from the velocity of his speed, or his efforts to advance in drawing a load; and the rapidity of respiration is capable of increasing in number as to exceed even that of the pulse itself, and yet subside gradually to its former state of tranquillity and repose without any injurious effect on any part of the respiratory apparatus. The extent to which quick respiration may be carried, and its continuation urged with impunity, depends upon the degree of resistance offered by the above-named impediments. The less the obstruction to the movements of the machine, the sooner the rapid breathing becomes tranquil. This is the character of respiration in an animal of vigorous health, and in which the resistance of the previously described opposing accumulations has been removed—a state commonly termed “condition” or “fit to go.”

The inspiration and expiration are equal in the healthy horse in quick and in ordinary breathing, except the return of blood to the heart is very rapid, when there is occasional sighing. In this case the mutual balance, or proportionate number of the heart's contractions to each respiration, is disturbed. Four pulsations to one respiration is the natural standard of relationship, and when this is interrupted proportionate derangement succeeds. When

the number of pulsations is increased during inspiration, the lungs shew signs of engorgement; the spleen is liable to distention, and afflux of blood into the portal system may take place. This is of great importance to the knowledge of men on the "turf," as jockeys, and will be the more obvious on a view of the action of the glottis during respiration. During great efforts of the animal the glottis is closed, and respiration suspended for the short period of considerable exertion. Sporting men well know that a horse can make but one great struggle in a race: to use their own diction, "loose his head, and you finish:" and this is owing to the continuance of the heart's action during a closed state of the glottis, and consequent engorgement of the lungs. But this state of the chest can be endured only for a very short period: the glottis is opened, the atmospheric air rushes through the trachea to the lungs, and the whole of the respiratory muscles are seen actively engaged in restoring the *consensus* between the respiration and the circulation, which is soon accomplished, provided the animal is in vigorous health and good wind. If a horse labours under any of the impediments to respiration, more especially fat accumulated in idleness, or too little work for the food he has been indulged with, it will be found that the respirations increase more than the pulse during strong exercise, becoming, instead of one to four, only one to two, or two to three. Take a horse that is ridden moderately as a hack, and lives on good food, and a liberal allowance of it, the interstices of his muscles filled up, and his neck full and firm in the subflavum, and presume that he has had a moderate allowance of water, and been at exercise for an hour, and discharged the fæcal contents of the rectum—let him trot smartly or hand canter over a fallow or soft turf field for fifteen minutes, and his respirations will have increased to 35 or 40, and his pulse to 70 or 80; but the respiration will continue equal, accompanied with frequent sighs, or long inspirations, arising, as before stated, from an increased action in the venous circulation, and a consequent augmentation of blood in the cavæ and large veins entering the chest. The sounds of the heart are altered, and reflux of blood is observed in the jugulars to be much more than during slow or walking exercise: however, this tumult and commotion of the chest will gradually subside to its ordinary repose if the horse is allowed to remain quiet for a short time, and the inconvenience that has been given to the animal by the exertion will be so trifling as to leave no visible signs of its existence. On the other hand, let us suppose a thorough-bred horse brought to the post, having gone through his usual training, and a degree of work equal to the removal from his system of every particle of impeding material to respira-

tion, and consequently with an invigorated nervous energy in all his muscles, a moderate gallop of half a mile would scarcely disturb his ordinary pulse or respirations. If he runs his two and a half or three miles in a race strongly contested, his respiration increases in number to two-thirds that of his pulse, with reflux of blood into the large veins: still the inspiration and expiration will be equal, with much less sighing and prolonged inspirations occurring; and the ordinary breathing will the more quickly return on the horse resuming a tranquil state, as compared with the previous illustration.

From the foregoing remarks, it will be observed, that the character of respiration in health is the equality of the two actions of the thorax, dilatation and contraction; a reciprocal action of inspiration and expiration of uniform extent. Whenever this mutuality in the respiration is disturbed, disease exists in some part of the respiratory machine, and some impediment is operating, proceeding from a change of structure or function, or both. Inspiration may be quick or slow, short or prolonged, regular or interrupted, difficult or facile, thoracic or diaphragmatic, painful, limited, or extensive.

The movements in expiration may be hurried or prolonged, laborious and convulsive, or both these acts of breathing may be at the same time exceedingly limited or extensive; the whole having many modifications, and severally arising from particular causes and influences, thus constituting, in the performance of respiration, signs and characters of many diseases of the utmost importance in veterinary pathology. It is an attempt to describe, unmixed with any other symptoms, these indications of disorder that I principally intend by this essay; and in whatever degree I may fail to accomplish the task, I shall feel gratified if I succeed in making the production in some measure useful to the reader.

*The character of respiration in disease.*—I will commence with the nasal passages, the changes of structure occurring in them, either temporary or permanent, which obstruct the ingress and egress of air to the lungs, and thereby alter the character of respiration. First, in enumeration, we have a tumefied state of the Schneiderian membrane from inflammatory action in catarrh, which in mild cases is not visible in the movements of the chest; but, when the affection is severe, and inflammation runs high, with effusion into the mucous and submucous tissues, then the air to and from the lungs is impeded and sensibly felt. Occasionally the turbinata are enlarged, commonly on one side, possibly on both, advancing into the nasal fossa. Fractures of the face, and accumulations of pus in the maxillary sinus, also di-



minish the caliber of the passages. The pituitary membrane is subject to polypi\* and steatoma: the latter are sometimes formed upon the posterior surface of the velum palati; in each of these cases the inspiration is prolonged, and there is more or less roaring in ordinary breathing. If by excitement of the animal the breathing is quickened, roaring is heard in expiration as well as inspiration, and the former, which before was shorter, is now equally prolonged with the inspiration. The glottis comes next for consideration. Whatever may tend to lessen the dimension of this aperture to the trachea will most certainly affect the respiration. The various changes arising from disease in this part of the respiratory canal are, thickening of the lining membrane; ulceration of it; atrophy and hypertrophy of the laryngeal muscles; ossification of the cartilages forming the glottis; defective nervous influence to the muscles of the larynx; tumours external of the glottis, or enlargement of the salivary glands, producing constriction by pressure: any of these abnormal alterations of structure produce an impediment to the ingress and egress of air in respiration. The inspiration is thereby prolonged in ordinary breathing during moderate exertion, but, if the respiration is hurried, the inspiration and expiration are nearly equal. The change in the character of the inspiration is accompanied by an increase and alteration of the blowing sound natural to the glottis, or a *whistling* or *roaring* is audible, according to the degree of obstruction through the aperture, and the extent of exertion to which the horse is submitted. It is remarkable, in all cases of obstruction through the glottis, that the inspiration is more difficult than the expiration; and all the irregular or morbid sounds arising from disease of the larynx are sounds of inspiration, coughing excepted, while those natural to the animal are sounds of expiration; such are neighing and snorting. Our best veterinary writer, Mr. Percivall, in his Lectures, ascribes snorting to inspiration; but this is an error: it is a long, powerful, and sonorous expiration. In all cases of roaring the sound is emitted during inspiration; and it is only under violent continued exertion that a horse can be heard to roar in expiration, and even then it is much less audible

\* The French speak of polypi of the nasal membrane. I never saw a case myself, but steatoma upon the velum I have witnessed.

Mr. J. Sewell, of Brighton, had a case of polypus in the right nostril of a horse, which he removed by slitting up the ala to the superior angle and dragging it away, rupturing the pedicle at its base, and the case did well.—THE VETERINARIAN for 1836, p. 400.

Mr. Brown, of Melton Mowbray, relates a case as occurring in the stomach of a horse.—THE VETERINARIAN for 1834, p. 76.

Mr. Goodworth, of Driffield, gives a case of polypus in the pharynx of a mare; and at p. 631 of THE VETERINARIAN for 1831, a contributor under the signature T.—Youatt—appears to be quite familiar with them: consequently there can be no doubt as to the horse being an animal subject to them.

than in inspiration. This very important character of diseased respiration—roaring—is seated in the larynx, which is the ordinary situation of the disease, and arises from one or other of the morbid and abnormal changes before enumerated.

A horse may roar from some obstruction within his head, his windpipe, or lungs; but such cases are anomalous, and but rarely met with. This character of diseased wind is ordinarily the consequence of inflamed larynx, whether it is a complication of catarrh, strangles, or other affection; and every man in the profession that has seen much practice, must have experienced the fact. Our late Professor of the Veterinary College, Mr. Coleman, a keen observer, and seldom wrong in whatever related to the horse, was of opinion that roarers were good winded;—I will here introduce his own words: “Roaring is produced from various causes: the membrane lining the windpipe becomes thickened from inflammation, and throws forth coagulable lymph in various forms. Sometimes it is found extending across the windpipe; so that, when the air rushes out of the lungs, it goes against the lymph, and occasions roaring. It is truly astonishing that a roarer is a good-winded horse: to many it appears not so; but yet it is a fact. You shall hear a horse in a coach roar for some little time before you meet him; but bad as he appears, the moment he stops he shall cease to roar, and his breath shall be no more oppressed, nor his flanks heave any more than any other horse in the coach. The fact is, the horse’s lungs are good, but the coagulable lymph thrown across the windpipe intercepts the air passing from the lungs in expiration, and produces this noise.” I am not a little surprised that so ingenious and talented a man as Mr. Coleman was, should have formed such an opinion as to the ordinary seat, cause, and effect of roaring, that, because the lungs were not diseased, the horse’s wind was good. If there is obstruction of the air passing to and from the lungs, the respiration is certainly imperfect. One portion of the respiratory machine is perfect, another part of it is defective, and this defect will and does interfere with the whole. However, practical information must always take precedence of theoretical knowledge, and the truth of the subject is, that roarers are not of good wind. If ridden to hounds, and the pace is fast, and the country heavy, they become blown, fall at their fences, stop, heave at the flanks badly enough, and the noise they make is very much increased. Horses that only whistle in strong galloping will roar when pressed with hounds in deep ground. Mr. Percivall tried an experiment upon the trachea, by tying a tape round the tube one-third of the way down the neck. The animal roared when the ligature was moderately tight; and when the windpipe was compressed to half its size it produced whistling. This appears the reverse of my state-

statement; but the experiment failed to give the true result as it occurs in horses made roarers by the ordinary process of disease. Mr. Percivall's experiment sets the question at rest as to the seat of whistling not having place in the windpipe, because whistling is a mild form of roaring, which the experiment by ligature would shew to be a more extensive disease than actual roaring; while at the same time it has been proved to me by experience, repeatedly confirmed upon the backs of animals thus affected, that we first hear, when galloping a whistler, a something in his breathing, to use the words of an old friend and very good judge, "not quite right." As the horse proceeds, this sound grows more distinct and remarkable: at length he is heard to whistle, and, provided the trial is sufficiently prolonged and severe, the whistler will disclose that he also roars. However, there are whistlers that require more than others to make them roar; but put weight upon their backs, and get them into a stiff country with hounds and a good fox, and there are but few whistlers who will not discover themselves distinct roarers. I mention this circumstance not as a mode of detection, but to shew the nature of the disease. Whistling, therefore, is a modification of roaring, and very commonly terminates in the exclamatory form of the affection.

[To be continued.]

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## CASES OF RABIES AND CONGESTION OF THE BRAIN.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

CASE I.—On Sunday morning, April 4th, 1841, I was sent for to see a yearling calf, belonging to Mr. Dickins, of the Black Park, near this place. She was first observed about seven o'clock on the previous night, in a field adjoining the house, and was roaring a great deal, and looked very wild, foaming at the mouth, and galloping about for some distance, and then falling down. She was left out with some others during the night.

5th.—Early on the following morning she was in a similar state, except that she would run at any one. At nine in the morning I saw her, and found her in one of the divisions of a cow-house. She was standing up, but on going near her she would make a bolt at us. She foamed at the mouth a little. Her general appearance was bold and lively, particularly about the



head and eyes. The respiration was unaltered. She would stand up for awhile, and then lie down. We punctured her about the nose to bleed her, but I fancy little blood was obtained.

1 P.M.—I went into a bin and looked through an opening there, and then she ran in a bold wild state towards me. At the cow-house door I attempted to frighten her when she was lying down, but she immediately sprang up and ran at me furiously. I threw her a few sprigs of greens, of which she swallowed one or two pieces; but she would not touch a little good hay. We then brought some water in an iron bowl-dish, which she tried to knock over; she then laid hold of the edge of the dish with her mouth, and afterwards put her nose into the water, but did not drink any of it, nor shew any dread of it. She, afterwards, put her nose under the side of the dish, lay down, and stretched out her head and neck like a dog.

5th. 10 P.M.—She seems about the same. I watched her for nearly half an hour. I had half a pailful of water brought, and at times she would put her nose into it, and keep it there for a short period, when she would swallow a small quantity at a time: this she repeated about four times in the half hour; she also sucked the edge of the pail and bit it gently. She would attempt to bolt at us, if any one stirred or attempted to go near, or frighten her; she also pawed with her fore feet for awhile, occasionally picked up and ate the dirty straw, but did not eat any of the hay put to her; she however ate the green top of a turnip. The respiration was natural—she roared violently and often, and on finishing the roar there was a bellow and that peculiar yawning growl that some wild animals have when gaping or finishing their roar. After standing up awhile she would lie down again, and then suddenly spring up, and two or three times she hastily turned all round, her muzzle being in a direction towards her right side. This I fancied she did from not having sufficient room to run straight an end. At times she would stare at us or towards some surrounding object for a time, and then leave off. When she lay down she would do it rather roughly, and with all her legs at once; and sometimes she would stretch her head and neck down on the ground and her nose out. There was a little dry discharge from her eyes at each corner of them. Her general appearance about the head was lively, and she stared boldly at us; but she was beginning to get weaker.

6th. 11 A.M.—The symptoms very similar to yesterday, but she is evidently becoming weaker. It does not appear that she has passed any dung. She dropped with great force when she attempted to lie down: it was almost a tumble. The eyes look very hollow. The men saw her eat a little hay yesterday.

7th. 11 A.M.—Died. In about four hours after she was dead, I made an

*Examination.*—As she lay on the ground, there was a quantity of white froth at her nostrils as large as a fist. I first laid open the abdomen, which exhibited but little disease: there was a slight extravasation of blood in the connecting cellular membrane near the third and fourth stomachs. The rectum was full of lumps of hard fæces. The first, second, and third stomachs were beautifully sound. The first was three parts filled with the hay, straw, and rubbish that she had eaten, and it was moist. The second had but little in it, and that was almost fluid. The third was full, and the food had a greenish tint, and was soft. The fourth had but little in it, and that was very soft and almost fluid, and of a dark brown colour; its mucous coat was of a much darker colour than usual, and rather thickly covered with mucus. It was decidedly in an unhealthy state, if it could not be said to be inflamed. The intestines had little amiss about them. I then sawed open the head, from the nose to the neck, and there I found the most severe disease. The Schneiderian membrane was highly inflamed, and under a large portion of it was great extravasation of blood. The pharynx was also highly inflamed and of a dark sanguineous hue. On looking at the outside of the anterior portion of the trachea, the spaces between the cartilages were filled with, to all appearance, extravasated blood, and these spaces shewed a distinct red line between the cartilages. On cutting open the larynx, trachea, and bronchial tubes, they were found to be filled with foam, in a complete state, if I may say so, of fermentation. These parts were highly diseased, shewing in many places the bloodvessels ramifying beautifully on them, but especially so on that covering the posterior portions of the trachea that lap over each other. Throughout the whole of the lungs the bronchial tubes were filled with froth and mucus, and their lining membrane was of a darker colour than natural; there was evidently considerable secretion from it. There was no disease or inflammation in the brain or spinal marrow, but, on cutting the off shoulder away, I was enabled to examine the large branches of nerves forming and radiating from the axillary plexus, and found on them numerous spots of ecchymosis, both on the theca and on the nerves themselves. This was the case on the pneumogastric and many other nerves.

CASE II.—On the 7th of April 1841, towards night, Mr. Dickins supposed there was something the matter with another of his yearling calves, as she was seen standing under a hedge, and did not come to some turnips that the others were eating; he therefore put her up for the night, and when he was taking

her to the cowhouse some ducks were in the road, but which she did not like to come near. She was only supposed to be a little unwell. The next morning she was taken to the field to see how she would behave, when she again met with a lot of ducks, at which she ran furiously. She was bled almost to syncope, and it is supposed that she lost nearly three quarts of blood. A quarter of a pound of salts were given.

8th.—I saw her at night. She did not then shew that much was the matter with her, and she retreated from me when I attempted to strike her with my walking-stick, but still, from her roaring and other symptoms, I was inclined to believe that all was not right; indeed, I feared that rabies existed, and would shew itself more on the following day, although I could believe that the bleeding had subdued the disease a little.

9th, 3 P.M.—She was standing up when I got there, but soon manifested symptoms of the disease by bellowing until her head almost touched the ground, and then she would drop on her fore legs first, her whole body soon following. On attempting to frighten her she would run at us, as the other did. I had a bucketful of water brought to her, and she immediately got the edge of it in her mouth to bite it, and tried to put her nose under it to upset it. She then put her nose into the water, but did not shew much inclination to drink, although I think she effected one swallow. I then made a noise in the water with my stick, which seemed to disturb her very much, as she began bellowing, and continued to do so as long as I stirred the water: it seemed to disturb her whole frame, and she appeared to become more and more wild and irritable. I repeated this many times, and with the same result.

I moved my stick about and before her face, but it did not at all annoy her, nor would she go away, however hard I struck her. I did not see her eat any thing although I put some hay before her. I also threw some tops of turnips to her, but she only mumbled them. The men said, that in the course of the day she ran against the walls and stalls, evidently with a design to butt and do injury, and that she had eaten a little hay, but did not know whether she had drunk any water.

She was evidently getting weaker and exhausted, in comparison to what she was when I last saw her. She had been drenched with mag. sulph.  $\mathfrak{z}$ iv in the morning. Her general appearance, at times, was lively, and her eyes looked clear. Sometimes she gaped and frothed at the mouth. Although she looked thus well, she would at times suddenly become depressed, and lie down as if exhausted, and I fancied that she would be dead before the morning.



10th.—I found that she had died in the night, and at ten o'clock on the next morning I examined her. There was a little froth at her nostrils. On cutting the off shoulder away I examined the axillary plexus of nerves, and those going to form it and branching from it, but could not observe that inflammation or ecchymosis on them which I did in the other case; nor was there scarcely any such appearance on the large nerves throughout the body.

On laying open the thorax and abdomen, they appeared nearly in their natural state. There was a little discolouration about the external parts of the auricles; but on cutting into the cavities of the heart they were found to be natural. The vessels attached to the heart had not the least inflammation either internally or externally.

The first stomach was three parts filled with food, commixed with water and sand. The second had a little soft food in it, almost liquid, and mixed with some sand, and both stomachs appeared to be in their natural state. The third was filled with food and some sand, and three parts of the food was soft and in a natural state, but the other part was harder, and a little inclined to constipation: the stomach shewed patches of inflammation, but not to any great degree, where the food was hardened. The fourth stomach had but little in it except sand and some liquid, and it presented exactly the same appearance as the fourth stomach in the other calf.

In some of the small intestines there was rather a considerable secretion of blackish mucus, and the membrane had a streaky appearance; and on some of the larger intestines there were distinct patches of inflammation on the inner coat, but in all the contents were nearly liquid.

The liver looked any thing but natural, having a clayey colour, and on cutting into it exhibited short crooked yellow streaks. The gall-bladder was very full of dark yellow bile.

The trachea and lungs were next removed. The former looked very white externally, with the exception of a few spaces between its cartilages, and which were of a red colour. On cutting the trachea and bronchial tubes open they were found to be full of froth or spume, and were in a high state of inflammation. The lungs were in some places rather darker than usual. I then sawed open the nose and head, and I had the same excessive inflammation about the nostrils, larynx, and pharynx, as in the other case.

No vesicles under the tongue. Neither the brain nor its meninges inflamed, nor was the cervical portion of the spinal marrow.

CASE III.—*7th April, 1841.* Mr. Dudleston, of Titstock Park, thought that a large three-year-old pony of his that was running out in a yard was ill. It was supposed to have been attacked by colic, as it was biting at his sheath and sides, and occasionally lying down, as if in great pain. His people tried to catch the pony, but had difficulty in doing so, and more to hold him, for he would bite at them and pull them about in every direction. Once they got a pair of pincers on his nose, but the man holding them said he must loosen them, as the animal would tear the piece out rather than be held. They were nearly an hour in trying to drench him with some salt and water, and when doing so he would bite at them and at the horn, and they did not believe that any of the liquid was swallowed. Soon afterwards, and about ten at night, a man came over and gave me the above information, but I told him to bleed him if possible, and that I would see him early the next morning.

*8th.*—About six, A.M. I saw him—he was loose in the yard, and completely covered with mud and dirt. If any persons went near him he would run furiously at them. He had not been bled, as Mr. Dudleston's people dared not to go near him now. He was continually biting at his sides and breast, and on the off side near the flank he had completely torn the skin from the muscles of the abdomen a foot square or more, and it was hanging down in shreds: he did not so often bite his near side or breast, nor had he injured it so much on the off side. I took him some hay into the middle of the yard, when he was at the other end: he immediately walked towards it, and coming within two or three yards of it he sprang forwards, bolted toward it, and fell almost on his knees. He immediately grasped a mouthful of it, and shook it violently in the air. I then sent a pailful of water into the yard, when he again walked towards it as he did to the hay, and hastily sprang at it and forced his nose into the water, and then caught hold of the pail, and worried it in his mouth in the air. Mr. D. thought he swallowed once, but I doubt it.

A stray fowl entered the yard, and he ran furiously at it.

He would often lay hold of his off side, and hold it fast and turn round four or five times, and then drop down exhausted. Sometimes, after he had been standing up awhile, he would drop down and roll almost over.

His appearance was bold and animated, and he walked or trotted in a stately way towards any thing; but when any one attempted to go towards him, he would squat his ears close to his head and run at them in a most determined vicious manner; yet I believe, at times, he had a degree of fear, for he was often frightened back again when he attempted to run at us.

The respiration was, at times, a little increased, but that was of no great moment or duration. There was a spot in the fold higher than the rest, and to which he generally walked, and would then stand in an attitude of watchfulness and defiance. We drove a number of fowls to him, but he soon dashed among them and dispersed them. His dung was hard and buttony. We at length got him confined in a small hovel, in which was a manger, but he soon fetched it down with his feet. Here we also put a pailful of water to him, but he only dashed his nose into it, and soon upset it with his feet, and then forced his nose under it.

Towards one o'clock, P.M., he was, rather unexpectedly, found dead.

Being much engaged, no post-mortem examination was made.

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## CONGESTION OF THE BRAIN IN A CALF TWO MONTHS OLD.

*By the same.*

*April 10, 1841.*—As soon as I got into the yard to examine the second case of rabies, I was desired to see a two-months-old rearing calf that was said to be dying. I found the owner trying to bleed her, but with little effect, as she died immediately.

The particulars of the case are these:—On the night before, it took its food as usual; but this morning the servant thought it was not so well, as it would not take its meal, and looked very heavy about its head, and hung it down and frothed at the mouth. Mrs. D. then gave her some gin with an egg in it, and in an hour afterwards it was heard to be knocking about the place in which it was. Soon afterwards the door flew open, and she came out and turned round many times, and in the scuffle got into a mixen-hole, but was soon got out, and tried to be bled.

Feeling anxious to open her on account of the two yearlings, I did so an hour after she died. I could find nothing but great congestion in the meninges of the brain, and a slight inflammation about the nostrils, larynx, and lining membrane of the trachea. There was no froth in the trachea or bronchial tubes, nor were the lungs in the least diseased. All other parts were beautifully sound; and it is my opinion that death was caused by a determination of blood to the brain, and probably increased by the tight ligature on the neck in trying to bleed her.

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COMPTE RENDU OF THE LABOURS OF THE PROFESSOR OF PATHOLOGY IN THE SCHOOL OF LYONS, IN THE SCHOLASTIC YEAR 1839-40.

*By* M. RAINARD.

THERE have been entered in our hospitals, from the 20th of August 1839 to the 10th of August 1840, seven hundred and nine animals labouring under different diseases, the greater number of them being horses and dogs, with a comparatively smaller proportion of cattle and sheep.

The mortality has been a little more than one in six, and that including the horses that have died of glanders, and the dogs that have been rabid. A great number of patients of both descriptions are brought to us every year, and who die in our infirmary without the possibility of cure.

Glanders has been very prevalent during the last year, owing to the strange variations of temperature; and other maladies, ordinarily exciting little alarm, have taken on a more than usual formidable appearance. Diseases of the mucous membranes of the respiratory passages, such as strangles, coryza, angina, bronchitis, &c. especially during sudden variations of the weather, have rarely presented themselves in their simple form, but have been attended by an unusual violence and complication, and obstinacy of symptoms seldom experienced. In many cases coryza, simple in appearance, has been followed by enlargement and induration of the submaxillary glands, that have ultimately assumed the character of glanders.

From the sudden changes of temperature which have characterized the last year many horses have been attacked by serious diseases of the throat, and which indeed in some cases have been fatal. The Eustachian tube has become the seat of abscess, which has only been got rid of by puncture beneath the parotid, effected either by the bistoury or the actual cautery.

These maladies, when they appear without complication and in animals of good constitution, generally confine themselves to the production of a considerable degree of weakness and emaciation, from the difficulty there is in swallowing the food. The period of convalescence is generally long, but it is hastened and secured by the employment of mild tonic and nutritive food: when these inflammations of the mucous membrane of the upper passages are complicated with that of the bronchi and the pleura, the animals, notwithstanding the adoption of the most judicious treatment, are generally lost.

The apthous epizootic of cattle has caused little mortality, but considerable loss has been experienced from the diminution or suppression of their milk, or the state of emaciation to which they have been reduced. Although its causes are little known, its duration and its return are attributable to frequent changes of temperature, or to the hygrometric state of the atmosphere. The treatment depends on the peculiar character which the disease assumes. Whenever a decided adynamic character was present the employment of the mild vegetable tonics was clearly indicated.

The distemper of dogs has been more than usually prevalent, and a great number have perished from the determination of the inflammation to the lungs or the pleura. The nervous or rheumatic affections to which they are occasionally subject have been less frequent, which is probably to be attributed to the uniformity of temperature that has prevailed. For the same reason, rabies has not been prevalent.

Towards the end of the winter and the commencement of spring, and produced by the sudden and precocious increase of atmospheric temperature, a disease prevailed among the market cart-horses, and those that were employed in lighter agricultural labours, or that were driven to the different markets for the purpose of sale, characterized by intense gastric fever, loss of appetite and strength, constipation, determination of blood to the head, and giving to the patient a strange straggling gait. The pulse was full—the respiration embarrassed—the vessels of the conjunctiva injected—the eyelids swelled, and even the body of the eye participating in the inflammation.

After a few days a deposit of lymph or of blood took place in the anterior chamber of the eye. The skin and the exterior mucous membrane were also of a yellow hue.

Our first indication of cure was to combat the cerebral congestion, and the inflammation of the eyes by general bleeding and the application of local refrigerants. The second indication was to abate the disturbance of the stomach by the employment of barley-water acidulated with vinegar, or with nitre dissolved in it, and also to make use of frequent injections. The tension of the abdomen, the colicky pains and the tumefaction of the region of the liver, required emollient and anodyne applications. The continuance of the congestion of the brain, or eyes, or abdomen, indicated the necessity of further abstraction of blood, but less general, less copious, and confined to the vessels of the face, or palate, or external thoracic vein, or one of the saphenas. Then also, if the internal membranes of the eye had become the seat of a morbid secretion, setons were placed in the poll; or, if



there was cough or difficulty of respiration, indicating congestion of the lungs, setons were had recourse to, or the sides and chest were blistered. This method of treatment was generally successful, if the animal was attended to in time, and was of a good constitution, and exempt from organic lesions.

Gastric fever, however, was sometimes indicated by symptoms less apparent and decisive. This was sometimes the case on the first attack, but was oftener the consequence of being put to work too soon, or having been exposed anew to the original causes of disease. In these cases the appetite was diminished or destroyed—the skin harsh and dry, and the strength and spirits much diminished in despite of every thing that could be done to prevent it. Colicky pains were evident and sometimes violent; there was cough and difficulty of respiration; and at length the patients pined away and died. Traces of inflammation of the abdominal viscera were found, with lesions of the lungs or false membranes in the thoracic cavity, or pleuritic effusion.

Bronchitis, pneumonia, and pleurisy, have been very frequent in the last session, and almost always fatal in the animals in which previous organic lesions had existed, or there was a tendency to tubercular affections. The animals that were attacked having arrived at the period when resolution took place, were characterized by their extremely fœtid breath, and, a little time after this, a fœtid discharge issued from the nostrils. The pituitary membrane was ulcerated, and pneumonia was succeeded by glanders.

Attentive observation of the diseases of the chest in horses shews their extreme obscurity, notwithstanding the two powerful auxiliaries we have in percussion and auscultation. However carefully we may examine the walls of the chest, it is only a small part of the lung that can be brought under our cognizance. In a great majority of cases they are the inferior borders and the anterior appendices of the lungs, which undergo a morbid change, and they are precisely the parts which correspond with those portions of the walls of the thorax which it is impossible to explore.

We have observed two cases in the last year in which inflammation of the joints has followed an attack of pleurisy. This affection, to which M. Bouley, jun. has for the first time called the attention of the profession, prevents the convalescence which should succeed to the subsidence of pleurisy, and wears down the flesh and the strength of the animal by means of the pain and disgust of food which so rapidly follow the first disease. We have adopted the treatment of M. Bouley, which consists, in the acute stage, of local bleeding, emollient cataplasms, and anodynes,



and, in the chronic state, the use of resolvents, and, as a last resource, the actual cautery.

It is often difficult to ascertain the precise disease of our patients, and the other maladies with which it may be connected. A cab-master brought to us one of his horses which he said had been ill-used by the driver. The throat was very tender when pressed upon—mingled spume and mucus ran from the nostrils,—and, whenever he attempted to eat or to drink, the aliment returned through the nostrils. The posterior part of the mouth on examination presented a slight excoriation, but this had nothing to do with the vomition, for the food passed over it as readily during deglutition as on its return speedily afterwards. We could not suspect rupture of the stomach, for there was no enlargement of the belly, nor did the animal appear to suffer any pain; besides, a rupture of the stomach could not have continued so long without certain death.

We imagined that there was rupture of the œsophagus, but of the description or serious nature of which we had no means of judging. In the meantime the patient retained no food, gradually lost all strength, and withered away and died. On examination after death we found a rent on the left side of the pharynx, nearly four inches in length, which penetrated through the mucous membrane and the cellular substance which separated it from the fleshy surface of the œsophagus, and appeared like a vast pouch that extended to the right sac of the stomach, and in which were collections of liquid and solid food, exhaling the most offensive smell. It would certainly have been difficult to have guessed at any lesion like this, or to have explained its effects until after an examination of the dead body.

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## ON PUERPERAL FEVER.

*By Mr. J. D. HARRISON, V.S., Southport.*

THE attention of your readers having frequently been drawn to the disease in cows, which is generally called puerperal or milk fever, I purpose, with your permission, to give a short account of the treatment which in my own practice I have found most efficacious. It not being in my power to throw any new light upon the seat of the complaint, I shall not intrude farther upon your pages than a brief recital of my own opinions, deduced from a long and extensive practice, will necessarily occupy.

The malady is by some considered to be solely dependent upon a diseased state of a particular portion of the nervous system, with which opinion I cannot entirely concur, having so often found that inflammation or congestion of not one single but several organs will invariably be found upon dissection; while, sometimes, not the slightest speck can be discovered which might lead us to conclude or impress us with the conviction that its seat was in the nervous system, unless we are disposed to admit that in all cases of disease the nervous systems are primarily affected, or, in other words, that all inflammatory affections, &c. commence there.

One thing I am prepared to admit, and have not the slightest doubt but time and a further development of science will confirm it, that in all diseases, more especially of cows, the brain and nervous systems are more seriously involved than the practitioner of the present day could give credence to; but this it is impossible for the present state of veterinary physiology and pathology to demonstrate and confirm. For my own part, I look upon the disease in question as one of an inflammatory character, not confined to any particular organ, but affecting all the viscera; and in some cases I have seen the brain itself partake of the inflammation, and the animal in as furious a state as when phrenitis was the primary disease.

The inability to rise, so palpably evident in this disease, cannot by any one who has seen much of it be confounded with paralysis, the effect produced essentially differing from that affection; while the suddenness of the attack in the latter, compared with the gradual approach of the former, is in my opinion an insuperable bar to its being classed under the head of paralysis.

There is one other fact which all or most of us have witnessed;—in how many cases have we seen the animal restored to the perfect use of its posterior extremities the moment the bowels have been freely acted upon? I reply, in nine out of ten, and that in general I have had to date my patient's convalescence from that period. These facts coupled together, and opposed to the sudden and too often lasting attack of paralysis, preclude my subscribing to the common opinion.

When we take into consideration the real nature of a deep milked cow, and that she is daily in the habit of yielding us a large supply of nutriment until within, in many instances, a very short period of calving, and that during the time she is dry—as it is termed—plethora must and will in many cases ensue, the fœtus not being able to consume the extra quantity of nutriment produced from the cessation of the milk, and, perhaps, an extra quantity of nutritious food, we need not be surprised at

the effects produced, nor at the sudden recovery of our patients the moment we are able to accomplish a restoration of the secretions by depletion or purgatives.

The treatment which I have for several years pursued, and by which I have generally succeeded in nine cases out of ten, is bleeding (whether the animal be down or not), until a very sensible effect is produced upon the arterial system—purgatives of Epsom salts and sulphur, six ounces of the former and four of the latter, to which I generally add four drachms of the carbonate of ammonia, and give it to her in five or six quarts of water gruel, repeating the dose in four or five hours. I likewise apply a strong stimulant upon the loins every two or three hours, from which I think I derive a twofold benefit, viz. counter-irritation and frequent attempts in the animal, during that irritation, to rise. I occasionally have the loins smoothed with a hot iron, which I also think is beneficial; but, be it as it will, in the number of cases I have mentioned I have been successful, and have had them upon their legs in twenty-four hours. I must not omit to state, that I prohibit all food of a solid kind, and allow its guarded use alone for many days afterwards.

## ON FOUL, RED, OR BLACK WATER.

*By Mr. Cox, of Leek.*

I HAVE selected the two following cases out of many others of this disease, for it is but one disease assuming different appearances, or different stages of the same malady.

CASE I.—I was requested to visit a cow that had been voiding black water three days. The first symptom that attracted my attention was the violent palpitation or beating of the heart. I could hear it at a considerable distance, and the pulsations were 140 per minute. The appetite and milk were completely gone—the staring of the coat and the grinding of the teeth bespoke the danger of my patient, and the urine had been black from the first appearance of illness. There was no constipation of the bowels, for the owner had sufficiently purged her. Ere I could administer any medicine she was dead.

Four hours after death I examined her. The lungs, liver, intestines, and kidneys were in a comparatively healthy state. They were little different from what they are in slaughtered cattle. The heart had a peculiar flabby appearance—the animal might



be almost said to have died bloodless, and the flesh had a blanched appearance.

CASE II.—On August the 31st, 1840, I saw a cow that had been passing red water four days. The owner had opened her bowels with Glauber's salts, and had likewise *dressed her water*—a practice among many ignorant persons in this part of the country, to mix sulphuric acid with the cow's urine and bury it under ground.

The urine at the time when I saw her was of a muddy ale colour—her eyes sinking in their orbits,—continual grating of the teeth, and the coat staring. Although she was well clothed, yet she frequently shivered violently. The pulse was 110, and there was, occasionally, that palpitation of the heart which was mentioned in the last case. The breathing was much accelerated, and the appetite gone. The milk that she yielded was almost of the colour of her urine, and of a somewhat ropy consistence.

I commenced by giving her half an ounce each of alum, sulphate of iron, cascarilla and madder powder dissolved in warm water, and, in order to keep her bowels in a somewhat relaxed state, she had four ounces each of sulphate of magnesia and tartarized soda.

Sept. 1st.—She is somewhat better—the pulse is 102 and she eats a little. Her urine, however, remains the same. Repeat the medicine.

Sept. 2d.—She is evidently improving. The urine is nearly clear. Give of gentian and ginger half an ounce each.

Sept. 4th.—Discharged convalescent.

During the last year 11 cases came under treatment for red-water. Six of them had been neglected or maltreated, and one was very ill, but they all recovered under this management. Red or black-water in cattle is not a very fatal disease, or we should hear of more deaths from it considering the absurd treatment which is often adopted.

You may suppose from what I have written that I never use diuretics in red-water. They form a class of medicines little less than poisonous in such a case.

There is one fact connected with this disease, which has not been noticed by any writer—the extra-secretion of urine—the diuresis. A cow with black or red-water will void three times as much urine as she usually does in health, and by means of this it is that the vital system is occasionally so frequently and rapidly exhausted.

Many practitioners trace this disease to some affection of the liver or kidneys. In my opinion it is caused by the animal eating of some herb or herbs that cause derangement of the di-

gestive system—and the blood or vital system is speedily involved. I am confirmed in this by the fact, that red or black water almost never appears in the winter, and, even in the summer months, may be said to be confined to July, August, and September.

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[Although we confess that we are not altogether converts to Mr. Cox's opinion or treatment of red-water, there is something in this paper which deserves consideration. Will some of our country practitioners favour us with their experience?—Y.]

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## THE BENEFICIAL EFFECT OF OPIUM IN BRONCHITIS.

*By Mr. G. M. MARSHALL, Armagh, Ireland.*

IN this month's number of *THE VETERINARIAN* Mr. Horsburgh has called the attention of the veterinary profession to the question, "Whether opium can be properly and beneficially employed in the inflammations of organs or surfaces essential to life;" alluding, in particular, to inflammation of the mucous membranes of the respiratory passages. I now send you a case of bronchitis, and to the powerful sedative effect of opium I attribute its successful termination. Hoping this subject may be taken up by some of your highly-talented correspondents, I proceed to give you the particulars:—

*Dec. 19th, 1840.*—A bay coach horse, the property of Messrs. Anderson and Green, was this day placed under treatment. The symptoms were, a frequent, hard, dry cough—difficulty in swallowing—pain evinced on pressing the larynx—pulse from 40 to 45—the pituitary membrane a good deal injected, but no discharge from the nostrils.

I commenced my treatment by abstracting nearly four quarts of blood, applying a blister to the region of the larynx, extending it a short way down the trachea, administering sedative medicine consisting of verat. alb.  $\mathfrak{z}$ j and nit. potassæ  $\mathfrak{z}$ ij in a ball twice a-day, ordering mash diet, and giving an infusion of linseed to drink.

*20th.*—This morning I was summoned to him rather early, the horse-keeper informing me that he was much worse, "and shaking all over." On going to him I soon recognized the symptoms of bronchitis, viz., the pulse indistinct at the inferior maxillary artery, and scarcely to be felt at the side, owing to the violent tremor of the muscles of the left shoulder—respiration quick and short—great accumulation of mucus within the bronchi—the countenance indicative of anxiety and distress—the extremities

cold. I immediately inserted a seton in his chest, applied a blister over it, and gave a ball as yesterday. Warm clothing, and bandages to the legs.

2 P.M.—No remission of the symptoms: indeed I have but little hope of him, having had him under treatment for severe catarrh in July last. I now determined to give opium a trial, as the case was urgent, and accordingly, I dissolved two drachms of crude opium in warm water, which I gave him in some thin gruel.

7 P.M.—I gave opii  $\mathfrak{z}$ i in solution, as before.

9 P.M.—He is evidently under the influence of the opium, and I fancy there is a slight remission of the symptoms. Repeat the last dose.

21st. 2 A.M.—I again visited my patient, and felt satisfied that there was a still greater remission of the symptoms. He rested his head on the manger as if fast asleep, and it was only when he was almost falling that he was roused. No medicine was now given.

12 A.M.—All the symptoms greatly mitigated. I gave pot. tart. ant.  $\mathfrak{z}$ i, nit. potassa  $\mathfrak{z}$ ij in a ball, twice a day.

22d.—Improving, but there is a total suspension of intestinal action: I consequently ordered enemata frequently, and directed him to be horned with well-boiled gruel three times a day.

23d.—Bowels still torpid. Continue the enemata and gruel, as before. Gave a ball of pot. tart. ant.  $\mathfrak{z}$ j, sulph. ferri  $\mathfrak{z}$ ij, and zingib.  $\mathfrak{z}$ ij.

24th.—Bowels regular. Gave ball as yesterday, which was continued to the 31st, when he was discharged.

P.S.—I am trying the effects of the ung. iod. hydrarg. in an enormous bursal enlargement of the hock, also in cases of bone spavin, on two valuable colts, the one four and the other three years old. The result I will communicate to you at no distant period. I have been very successful with it in glandular enlargements.

## TWO CASES OF TAPPING FOR HYDROTHORAX IN THE HORSE.

*By Mr. HENRY MOGFORD, V.S., High Wycombe.*

### CASE I.

ON the 29th of May, 1840, I was called upon by a carrier, named Daniel Pym, of Loudwater, near High Wycombe, to attend a grey cart gelding, aged, which had been ill for some time,



as represented to me, with "a bad cold, and had been overdone." A little blood had been taken from him, and some cordials, beer messes and gruel (favourite remedies in this country), administered. The horse presented every appearance of suffering from pleuritis, for which he had been injudiciously treated. There was great debility, with fever. I gave the usual fever and diaphoretic medicines. His cough left him, the fever abated, the appetite returned, and he lay down: yet, although there was such evident amendment and signs of recovery, I was, from the first, apprehensive of effusion taking place in the chest. I cannot now put the symptoms into any tangible form, yet I was almost certain it would take place. This continued until June 4th, when I found that the breathing had become laborious, and he again kept his standing position. There was the peculiar wildness of the eye and the laboured action of the intercostal muscles, and my fears became confirmed. The following day all these symptoms were aggravated, and on applying the ear or the stethoscope, fluid was plainly distinguishable. In this state the owner was for sending him to the knacker; but, more for the experiment's sake than any hope of success, I proposed tapping; and, on my return from Wycombe in the evening, I introduced the trocar into the left side first, but no fluid appeared. I then tapped the right side, and took away a pailful and a half of a pale straw-coloured serous fluid. There was a considerable quantity wasted, and more would have come, even then, in gushes, but we could scarcely keep the animal from falling on us. The pulse was hardly perceptible during the escape of the fluid. After a few minutes the animal rallied; the pulse rose again to a healthy standard; the respiration became tranquil, and the animal immensely relieved. I closed the orifices as well as I could under the circumstances; gave him a small dose of the chloride of mercury, with sulphate of iron, and left him. The next morning I found him very much better; respiration perfectly tranquil, and the pulse not exceeding 40; but an extensive swelling occupying the right side of the chest and abdomen, reaching as far as the linea alba: a vast quantity of fluid having escaped into the cellular tissue. This swelling I punctured daily with a small lancet, and it gradually diminished. The horse daily regained strength and condition, lying down regularly; and, in one month from the time I was first called to him, he was at work, and drew a ton, and even 25 cwt. in a cart twice a week to London. The horse is at this time in good health and regular work, and I have not had a complaint ever since respecting him.

## CASE II.

Was a grey coach gelding, the property of Mr. Richard Taplin, of the Falcon Inn, High Wycombe, which I was called to on the 1st of Sept. 1840. This horse had been ailing for a long time before I saw him, and had been running in the Wycombe coach to Beaconsfield and back daily; and although considered by the owner as "not up to the mark," yet was thought not sufficiently ailing to discontinue work. On examination I found him labouring under a great degree of fever, the conjunctival membrane of the eyes and the pituitary membrane of the nostrils highly injected, great heat of the mouth, an anxious distressed countenance, failing appetite, pulse hard and wiry, and bowels rather constipated.

From the horse-keeper I learned that he had not lain down for a month or six weeks. I bled him freely from a large orifice, and opened the bowels with Mr. Percivall's laxative fever medicine. The horse, a day or two after, appeared much relieved: still there was considerable fever. I then gave him tartarized antimony, with the nitrate of potash, daily: the feverish symptoms, however, did not subside; the respiration became more laboured; the countenance more haggard, with a wilder look of the eyes. I then gave him chloride of mercury, tartarized antimony, and digitalis, and inserted setons in the chest: the feverish symptoms then abated suddenly, as if by a charm, and the animal appeared to be recovering. This went on until the 21st of Sept., when, by examining the chest daily, I became convinced that the inflammatory action had terminated in effusion. I communicated my opinion to the owner, and also to W. Jackson, Esq., surgeon, of Wycombe, who also daily auscultated the chest with the stethoscope and the ear. The symptoms became more confirmed, and the water rapidly accumulated. I proposed tapping, and, after a good deal of *pro* and *con* and much unnecessary delay, I was allowed to do so, and, accordingly, on the 25th of Sept. I operated, and took from the right side twenty-four quarts, by careful measurement, of a pale straw-coloured serous fluid. I then introduced the trocar into the left side, and drew off only three quarts. Previous to tapping, the animal appeared every moment to be breathing his last, and was with difficulty kept from falling during the escape of the fluid. In a short time, however, he rallied; the respiration became tranquillized, the pulse regained its natural action and frequency, and the horse appeared as if very little was the matter. The orifices were closed; the animal put in a loose box, kept quiet, and a bran mash with oats given him, which he ate with avidity. The setons were

dressed, small doses of the chloride of mercury, with sulphate of iron, given daily, and a liberal diet; and, for a few days, all seemed to be going on well: gradually, however, all the before-mentioned symptoms returned, although certainly not so rapidly as at first.

On the 2d of October, Mr. Jackson and myself came to the conclusion that it would be advisable to tap him again. I did so, and got half a pailful of fluid of the same character as before, being half the quantity obtained on the previous tapping. I left the orifice open, and fluid escaped in a small dribbling quantity from six o'clock in the evening until ten at night. The same relief was obtained as before, and all seemed again to go on favourably. Again, however, the symptoms returned, and effusion was evident, although certainly not even so rapidly as on the second time of tapping; however, on the 14th of October, we again considered there was sufficient water to warrant the operation, which was done, and about half a pailful was taken from the right side. The same relief was obtained; but the animal's appetite began to fail—he got thinner. The owner now got tired of him, and all at once sold him to a farmer, who turned him out in a field to take his chance, and he was soon found dead in a field. I very much regret that I was unable to obtain a post-mortem examination. I had no chance of seeing it; but I am convinced, in my own mind, that had tapping been had recourse to earlier, the case would have stood a chance of doing well; and even as it was, had it been persevered in, I should have been sanguine of success: so far as present recovery went, the quantity of fluid lessened at each tapping and at much longer intervals between the operations. No inflammation followed the operation; on the contrary the greatest relief was manifested every time. However, facts are facts, and all our efforts failed; but I should not hesitate a moment to tap again under the same circumstances; and am convinced that many an animal's life might be saved by doing so. It is the *time* of doing it, I think, wherein rests the great secret of success; and I have not a doubt in my own mind, that had Mr. Taplin's horse been operated on a few days earlier, it would have done well. I very much lament not being able now to give a more detailed account, and especially of the post-mortem appearances. I much wished to ascertain in what condition the lungs were; but I had no chance of doing so, and regrets are useless.

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## REMARKS ON THE FOREGOING CASES.

*By W. JACKSON, Esq., M.R.C.S.*

Sir,—MR. MOGFORD having favoured me with a perusal of his two cases of paracentesis thoracis prior to publication, I am desirous of giving my testimony to the correctness of his statement as regards the second case, in which Mr. Mogford was so obliging as to request my opinion as to the certainty of effusion in the thoracic cavities. Of the first case I had no knowledge but by report.

I have reason to thank Mr. Mogford for the opportunity of seeing Mr. Taplin's horse, and of witnessing the manifest good derived from his judicious treatment. I coincide with Mr. Mogford in opinion, that tapping, to produce a curative effect, should be performed as early as fluid can be satisfactorily detected; and I am also disposed to think, with him, that if the second case had been continued under his care, a more fortunate termination might have ensued. Mr. Mogford has omitted one circumstance, which to me appears worthy of notice. I allude to the rapid and complete coagulation of the fluid withdrawn in case 2, an occurrence which, I believe, does not take place with any dropsical fluid removed from the human subject.

## ON MURRAIN IN COWS AND CALVES.

*By Mr. JOSEPH CARLISLE, V.S., Wigton.*

THE following is a curious and unequivocal fact, that calves newly dropped have had confirmed murrain at the time, clearly proving that they must have imbibed the disease from the parent during utero-gestation. I have witnessed, at the time of birth, every symptom and effect of the disease truly manifested. Cattle will not take the epidemic a second time, even from vaccination, or at least according to my experience.

Cattle, in this part of the country, have done very badly after calving. There is a great tendency to force down the uterus, and it is generally from four to eight days before the placenta comes away. In several cases I was obliged to remove it by manual force. In six cases that came under my treatment, the uterus was completely forced down at the time of calving. When

practicable, I removed the placenta before reducing or returning the uterus.

Three cases took place in one cow-house, and the most remarkable thing was, that the cows were standing altogether.

The first case was a fatal one. The second case presented very alarming symptoms for some time; but I succeeded in combatting the disease, and was successful in the remainder of the cases. I consulted my friend, Mr. Relph, on the subject, and he informed me that he recollected cases of the same sort. In his opinion it was a species of epidemic, and I am inclined to think that it is connected with, or left on the animal by, the late epidemic. I am farther confirmed in my inference by the following facts:—

In not less than fifty patients that I was called upon to attend, and all of which had the epidemic, the animals were continually straining, as if they wanted to get rid of some foreign or irritating substance, and continuing to void a great quantity of putrid matter for a length of time. Many that were affected in this way never gave any milk; and others were obliged to go dry from the udder becoming so much affected. The disease was most successfully treated by bleeding and purgatives; sedatives being administered occasionally, and injections, per vaginam, composed of linseed tea and a decoction of white poppies.

May I be permitted to ask some of your numerous contributors what is the rationale of calves shewing symptoms of the epidemic at birth? Also, what can be the cause of that lurking irritable and inflammatory disposition of the uterus after parturition in the cattle previously affected by the epidemic?

## A CASE OF PUERPERAL FEVER.

*By Mr. R. B. PATERSON, V.S., Dumfries.*

I AM induced to send you the particulars of the subjoined case for insertion in your valuable Journal, from a desire that facts may be accumulated for the purpose (if possible) of forming a correct pathology of that direful malady, Puerperal Fever.

I was, at half past twelve o'clock on the morning of the 8th instant, called upon to attend a cow, the property of a gentleman in this neighbourhood, that was taken suddenly ill. She had calved on the 6th, without any unusual difficulty, and, up to 11 P.M. on the 7th, was, to all appearance, in perfect health,

eating and ruminating as usual; but on putting some hay before her, and the cowherd preparing to leave her for the night, she suddenly gave a snort, and tossed her head about, stamping with her feet. On going up to her head, he found, to his great astonishment, that her eyes were completely closed by the tumefaction of the parts adjacent. So suddenly did this occur, that he was induced to look among the hay for some venomous reptile, as the *vipera communis* was in great abundance at the place where the hay was cut. On finding none, they immediately came to me at the hour abovementioned. I was presently in attendance, and found her very uneasy, rubbing her head against the stall-post, shifting about the stall, and having all the appearance of labouring under an affection of the abdominal viscera, for the rumen was much distended with gas. The whole neighbourhood of the orbicularis palpebrarum was swelled so much that very little of the globe of the eye could be seen. The pulse was 70, full and bounding.

I immediately abstracted five or six quarts of blood: indeed I suffered the blood to run until the pulse began to falter. I then gave of the chloride of sodium in solution, which had the effect of decomposing the gas, and acting as a cathartic. I removed the contents of the rectum by means of enemas, washed the tumefied parts with diluted acetic acid, and rubbed the legs and body well with straw, for the purpose of equalizing the circulation.

She now appeared to be somewhat relieved — the swelling around the eyes was nearly gone, and on the whole she looked as if she was recovering; but in the course of two or three hours she staggered and fell, and the rumen again became distended.

I then went into town for the purpose of procuring a probang, and on my return she was still down, and unable to rise. Her breathing was now become laborious; she was moaning, and seemed suffering very much. We kept the head cool with wet cloths, and passed the probang into the rumen; but little or no gas followed the introduction of the instrument.

I proposed that the whole course of the spine should be stimulated with liq. ammon. acet.; but the owner, seeing it was likely to be a hopeless case, did not wish her to be put to any unnecessary pain. The disease now ran its course with fearful rapidity. There were convulsive twitchings of the voluntary muscles, and the eye became completely amaurotic. Three hours previous to her death, the rumen being still distended, I punctured it, and a great quantity of gas escaped. As I learned that they had been very kind to her, I suspected that there was a great deal of solid ingesta in the paunch. I enlarged the opening, so as to admit



my finger, and found that the rumen was completely filled. I then considered that the difficulty of breathing was occasioned by the distended rumen preventing the proper action of the diaphragm. I therefore made an incision through the muscles of the flank, four inches in length, and evacuated the contents of the paunch. The pulse was then 130, and weak. She died at the close of the operation, which was at half past ten A.M., the whole duration of the disease being only eleven hours and a half.

Having other professional engagements, I went away, requesting them to get some one to take the skin off. When I returned, after the lapse of about four hours, they had cut off the head, and hung it up by the mouth. It is of importance to mark the position the head was in; for, after examining the pelvic, abdominal, and thoracic viscera, the appearance of which I will mention more particularly hereafter, I took down the head from where it was hanging, and on turning it round, a quantity of serum (to the amount of at least an ounce) escaped from the cavity of the cranium, through the foramen magnum of the occipital bone, and from the position the head was hanging in, more might have escaped unperceived. On laying open the abdomen, the peritoneum seemed perfectly free from disease, as also that portion of it covering the uterus. There was a quantity of viscid gelatinous matter in the body and cornu of that organ. There was nothing abnormal in the urinary organs. The stomachs and intestines bore no marks of inflammatory action, with the exception of the abomasum, which was highly inflamed. There was a quantity of hard impacted food in the third stomach, and about eight ounces of bile in the gall-bladder. The lungs were not in the least congested. There was a slight discolouration of the membrane covering the spinal cord at that part which passes through the bones of the sacrum.

On exposing the brain, the pia mater covering the anterior inferior lobes of the cerebrum was found in a high state of injection—it was nearly black. On making a section of the medullary mass, many minute red points were observed on the exposed surface. There was a quantity of sanguineous fluid in the lateral ventricles. On the surface of the thalami, there was an arborescent appearance, constituted by the minute vessels ramifying on the pia mater of that part.

I have purposely refrained from advancing any hypothesis. My only object in writing to you was, to furnish data, in conjunction with others, to enable those in the profession better qualified to do the subject that justice which its importance demands. I would only ask, in conclusion, whether firing over the frontal bone, with some powerful counter-irritant applied imme-

diately on the lines, would not have a good effect in such desperate cases; or putting a ligature round one or both carotids, as the parts mostly inflamed (in this case) derive their blood from these vessels. I may add, that she was in high condition, and that this was her first calf.

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## ON CATARACTS.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

IT is now seven years since I called the attention of the veterinary public to the probable formation of cataracts without inflammation, and also to the occasional absorption of capsular ones; and as Mr. Hales and Mr. Hickman never saw such a case, and the latter doubting that it ever takes place, I will lay before your readers the following quotation on the subject of absorption of cataracts in the human subject.

It is probable, since I mooted the point, that many may have observed such cases, and of which I should be most happy to hear a little more, as my only object is truth, and not to bolster up a favourite theory.

“Nor am I hasty in recommending the operation in cases of cataract from external injury, as blows or punctures of the cornea; having been led from experience to form the same opinion of the disease, when originating under such circumstances, which the late Mr. Pott entertained. (See *Pott's Chirurgical Works*, 8vo, vol. iii, p. 230).

“I apprehend that, in such cases, the capsule of the crystalline lens is generally the seat of the disease; and I have had the pleasure of seeing the opacity disappear gradually, without the use of any other means than those which were proper for removing inflammation. Such an event, however, does not always follow; and sometimes, where the sight is ultimately restored without an operation, the restoration advances by very slow degrees. My late colleague at the General Infirmary, Mr. Lucas, relates a case (see *Med. Obs. and Inquiries*, vol. vi, p. 264), in which ‘the opacity began to dissipate in a month’ after the accident, which was a blow upon the eye, ‘and in three months the patient could see with that nearly as well as the other eye.’ I have seen two cases, where the opacity continued a year before the natural transparency of the capsule began to be restored. In one case of this kind which I saw, the patient had been blind of the injured eye four years before the opacity began to disappear.

A frequent and most important consequence of the operation, and one that succeeds the method of extraction, as well as that of depression, is an opacity of the capsule of the chrystalline lens. This secondary cataract will appear when no inflammation has succeeded the operation. It will sometimes disappear by the effect of time, as in cases of cataract from blows or punctures ; but this event is often slow, and always uncertain.

“As the opacity of the capsule, which forms the secondary cataract, is usually diminished in some degree by time, I consult the inclination of my patients with respect to the time and frequency of these secondary operations.

“The lady, whose description of the pain arising from the operation I have already mentioned, had a secondary cataract in each eye. She chose to have the operation repeated upon one eye, and to wait the effect of time upon the other. Both methods succeeded ; but there was no return of transparency in the capsule of that eye for which the needle was not employed, till about six months after the depression of the cataract.”

From *W. Hey's Practical Observations in Surgery*, 2d edit. p. 58, &c.

## AN ACCOUNT OF A COW THAT HAD BEEN CHOAKED DURING THREE DAYS.

*By the same.*

Nov. 27th, 1840.—I WENT this afternoon to unchoak a cow of Mr. Sandford's, of Brick Lane. She was put up to feed on turnips, &c. She had had something amiss with her for three days, but whether from being choaked they could not tell for certain ; but she would, after she had eaten turnips, throw them up again. They kept the sole in her mouth (a common practice in this country) all this time, but she did not get any better. When I went I saw her eat some turnips, and found they went down the œsophagus, below the breast, but soon after she vomited them up again with the greatest ease. I therefore considered her to be choaked, or, perhaps, having some disease of the stomach that caused her to vomit. I was inclined to lean to the former opinion, and immediately passed the probang ; and I fancied, when it was nearly at the stomach, something gave way. I ordered her to have only a moist mash or gruel.

The next morning I was again sent for, as the cow was as bad as ever, from having had turnips. I accordingly went, and again introduced the probang, and I thought I felt a similar slight ob-



struction, low down, as I did before. I then took a gallon of blood from her, and gave a purging drink, so as to get rid of any inflammation or swelling in the œsophagus. I also gave strict orders for her not to have any thing that day but gruel, and also to be particular for a few days in dieting. The drink operated well, and she has not had another attack, although fed on turnips, &c.

Some time ago I was sent for to a cow that had inflammation of the lungs, and which was, no doubt, brought on in consequence of having been choaked for several days with a turnip, and she died of it.

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## ON THE EPIZOOTIC DISEASES IN HORSES, CATTLE, &c.

IN page 769 of the 12th volume of this Journal, we inserted an Obituary of Hurtrel D'Arboval, author of the Dictionary of Veterinary Medicine, and Surgery. There is one subject which, at the present moment, is more than usually interesting to us—the cause, nature, and treatment of epizootic disease in our domesticated animals. We have—thanks to the kindness of many of our friends!—sufficient to put us in possession of the opinions and practice of the greater part of our own brethren: it will be not a little important to become acquainted with that which is thought and done on the other side of the channel. M. Hurtrel d'Arboval had paid more than usual attention to this subject, and his treatise in the second edition is nearly double the length of that in the first. He thus commences his remarks.

“A profound study of epizootic disease is, perhaps, the most important branch of veterinary study and practice. These diseases, which occasionally destroy, in a short space of time, great multitudes of useful animals, are the more dangerous and fearful, because we know but little of their real nature, and the means by which they may be prevented. Their causes, obscure and concealed—their march insidious, yet rapid—fearful, and yet deceitful in their symptoms—murderous in their effects, they overcome a great number of victims, before their existence or their nature is for a moment suspected. In fact, they who first discover them are almost always ignorant persons, who see nothing in the malady of their cattle but the effect of some vulgar thing, which they think can be easily removed, and in the death of the animal, only a local and individual loss, with which those around

them have nothing to do. In the mean time, however, it is a malady which, not seeming to presage any evil, is propagated with incredible rapidity, and soon begins to threaten the flock with a degree of devastation as inevitable as it is astounding to those who have not observed its early symptoms. Favoured by a thousand unfortunate circumstances, the evil spreads from one pasture and from one farm to another, until it has established itself over an immense tract of country. It surmounts every barrier with which we would afterwards vainly oppose its fearful ravages, and seems to bid defiance to all human power and skill.

“Man, also, is exposed to contagion from many of these maladies, or to contract many serious diseases to which these epizootics have given birth, the result of which is, too often, the loss of the greater part of the persons attacked, without its being in the power of the most skilful medical men to diminish the number of victims. Paulet observes that, out of ninety-two epizootics, of which records have been preserved, twenty-one were common to man and the inferior animals; and Buniva remarks, that out of twenty that have ravaged Italy and Sicily, eight have attacked, at the same time, both the human being and the brute. The study of these epizootics is, then, well worthy of our deep attention. Many celebrated physicians have not disdained to occupy themselves in the study of these maladies, and to them we are indebted for the most interesting information, and the most valuable assistance in these sad moments of public calamity. If comparative anatomy is necessarily allied with that of man—if the relations of organization that exist between all the mammalia establish between the larger animals and the human being evident analogies in all the physiological and pathological changes which take place, comparative pathology must offer results highly useful in the study of general medicine. The knowledge of the diseases of animals, when it becomes more advanced, will contribute to diffuse new light on the maladies of the human being, and, perhaps, bring to perfection the methods of cure or prevention, owing to the facility of multiplying on the inferior animals experiments which we cannot attempt on the human being.

“The term *EPIZOOTIC*, agreeably to its etymology, comprehends, refers to, and embraces all the internal diseases, acute or chronic, of animals, from the moment in which the same disease begins to attack at the same time many individuals, whatever may be the nature, the duration, or the causes of the complaint. Arising from one common cause—more or less general, yet often unknown, or, at least, imperceptible to our view, or only appreciable in some cases by their approach to certain known facts and the consequences which flow from them—epizootic diseases are

ordinarily transmitted with extreme facility from one individual to another. They generally present themselves under the same aspect—following one analogous march—offering, occasionally, anomalies, the just value of which are not appreciated, or which are uselessly magnified into particular species. Finally, they too often terminate fatally, especially when they are unskilfully treated, which most assuredly is worse than not being treated at all.

“In despite of the labours and researches of many talented men, epizootics are, in the majority of works, somewhat badly observed, badly known, and badly described. We cannot but be surprised at this. Veterinary medicine, although it has made some progress, has here advanced but little. Far from being on a level with that of man, it languishes ignobly in its course; it succumbs under the influence of prejudice, empiricism, absurd routine, and abuses and disgraceful practices of every kind. The maladies of animals are often contradictorily classed—the nomenclature is vicious and barbarous. This is too much the character of the profession in many of the departments. In its schools, however, and particularly in those of Alfort and Lyons, very considerable improvement has taken place, and will conduct to the most important results, if these seminaries are true to themselves and to the profession to which they belong, and if they remove every obsolete principle and opinion that can now have no relation with the actual state of *medical science*, properly so called, and which is not in harmony with the laws of sound philosophy.

“Epizootic diseases, the ravages of which we find so difficult to arrest, owe their origin to certain general causes, to the influence of which a great number of animals are simultaneously submitted, and which act as modifications of their organization. Thus the air—the atmospheric temperature—certain localities—foul and vitiated air—the nature and quality of their food—travelling—work—accidents of all kinds, are so many causes which, under certain circumstances, have power to produce considerable and dangerous disease on all the individuals submitted to their influence. Such diseases are said to be epizootic. Among these causes, constant moisture is one which has the most destructive influence, from its effect on the vegetables on which the animals are fed. Not only does humidity deprive these vegetables of a part of their nutritive principle, by rendering them more aqueous, but it deteriorates their very nature. In years in which there is much wet during the summer the corn that is reaped undergoes a certain degree of germination, which injures its quality. Hay often suffers in the same way from a development of the fermenta-



tive process. This humidity has an injurious effect on all kinds of animals that have a weak and lymphatic temperament, among which are the ruminants. Sheep are in the unfavourable situation of most quickly receiving this impression. That which took place in 1816 affords a lamentable example of it. The rain continued to pour during the whole of the summer; and in consequence of this, almost every flock, even those that were best taken care of, became a prey to dropsy, which prevailed epizootically from the commencement of autumn.

“Humidity in excess aggravates the inconvenience both of cold and heat, and establishes a state of the atmosphere favourable to the production of the most destructive diseases. Epizootics do not, however, always proceed from this cause; but in addition to the too fatal disposition to imbibe this atmospheric influence, there comes the fatal principle of *contagion*, and here its ravages are exhibited on a dreadfully extensive scale. The theatre on which this principle develops its fatal influence is often most extensive, or, in fact, it is boundless. This is the case in many of the varieties of typhus to which cattle are exposed. There are historical records of its having more than once pervaded the whole of Europe, and, indeed, extended almost over the known world.

“In these dreadful circumstances, in which death claims so great a number of victims, medicine can furnish but little aid. The unknown origin and character of the disease is a most serious evil. It places the practitioner in a state of darkness and of doubt, which can only be dissipated by the light of experience, and experience of such a nature and to such an extent as rarely falls to the lot of any one. The earlier victims of the disease could not, at all events, benefit by it; and it is too rare that the veterinarian is consulted until the malady is confirmed, and its victims become numerous. They who first observe the change in the appearance of the animal are generally persons of little or no education. They see in the disease nothing but the effect of some trifling cause, of the existence of which they have never any doubt. The death of the animal is in their estimation perfectly accidental; it is only a local and an individual loss, and there is nothing about it to excite any general interest.

“Comparative pathology can offer some useful contributions to the science of general medicine, and, under this relation, is deserving of the regard of the human practitioner. Many celebrated professors of human medicine have not disdained to occupy themselves with the epizootics that have prevailed around, and they have always rendered eminent service in these seasons of public calamity. A medical man who regards himself as above inquiries or observations of this kind, being placed in a locality

in which there is no veterinary surgeon, or where there are none but ignorant peasants and impostors, will expose that district of country to absolute ruin. The contagion will not fail to proceed step by step, until the infected surface of the ground will be so wide that it will be scarcely possible ever to eradicate the evil. This account of too many of our districts is fearful, but it is strictly true. Often the nature of the epizootic has not been recognized until after a long succession of professional or unprofessional murders, and then the knowledge of the malady comes too late.

“Some epizootics commence simultaneously in a great number of places; others are first observed in one narrow district: but they rapidly begin to spread over a tract of country truly immense, observing, sometimes, as they proceed, one direction only; but in that fearful path traversing climates as different as it is possible to imagine. In some cases it travels with immense rapidity from one country to another. At other times its progress is altogether as slow, without, however, at any time being actually suspended. Occasionally the epizootic seems suddenly to disappear, but only to return all at once with ten-fold violence. This indicates the propriety of persevering in the employment of preservative means for some time after the epidemic has appeared to cease.

“With regard to their duration, the epizootics occasionally present a strange difference. Some disappear in the course of a few months—others continue to devastate the country for one or more years. Their course may, perhaps, be divided into several epochs, each of which offers some peculiarity, whether with regard to the symptoms or the complications, or the danger or the mode of termination, or that of treatment. In every epizootic there are periods in which they assume a serious and dangerous character—there are others in which they are comparatively mild. The treatment will necessarily vary according to the different periods of the disease and the variation of the symptoms.

“In every epidemic there are serious questions with regard to the use of the flesh and the milk of animals labouring under it. Should the use of them be permitted? or should the sale of one or both be forbidden? This is an exceedingly important and delicate question. It is essentially connected with the health and, perhaps, the life of man and brutes. The general opinion which is entertained and established of the possible and actual unwholesomeness of these things would naturally lead to their prohibition. This is the wisest and the safest course to pursue; and, although the interests of some individuals may suffer, both propriety and safety demand that their prohibition should be enforced. There are numerous cases in which the flesh of animals that had been destroyed by the epizootic has proved injurious to



the health of those who fed on it. There are other cases, and those as numerous, in which no bad consequence has followed. Are there any appearances in the animal while living, and his carcass after death, by which we may be assured that the disease, at first inflammatory, had not assumed a malignant type? Is there any line of distinction by which this may be certainly determined? Can it, without hazard of mistake, be always affirmed whether the patient died under a disease *gangréneuse* or *charbon-neuse*?

“With regard to the skins of animals that have died of this disease, the question is more easily answered. The chlorinated lime is a valuable and most powerful disinfectant, and a diluted solution of it will destroy every species of infection.

“*The preservative Treatment with regard to Epizootics.*—The essential, and, perhaps, the only preservative to be fully depended upon, is the separation of the sound animals from the diseased, and the careful disinfection of every place in which disease has appeared. Here the chlorinated lime will be most useful. The disease having broken out in a certain district, the passage of cattle through that district should be strictly prohibited, and all communication should be cut off between the infected district and those in which no disease has yet appeared.

“At the first appearance of an epizootic at a distance, attention should be paid to the health and good feeding of the cattle. A beast that is in good health and condition has the best chance of escaping the plague. If the infection breaks out in the midst of a densely populated country, two means of arresting its progress have been recommended. The first is the destruction of every beast that exhibits the least symptom of infection: but this would be ruinous to the proprietors, while it would rarely or never accomplish the desired purpose. The cattle would probably have been too densely located to afford the hope that many of them would, sooner or later, escape the infection. Even in a country thinly inhabited it is doubtful whether this fearful massacre would be so effective as some have imagined. Would it alter the state of the atmosphere—the quality of the soil—the nature and the state of the food, or the emanations which some have supposed to be a cause of this disease? Would it be prudent to give up all the chances favourable to the patient? Have we not many proofs that the malady, even left to the unassisted power of nature after its first explosion—always the most dreadful—loses its intensity, and becomes gradually extinguished, in course of time, if the expression may be used? Is there not a constitutional power which, in spite even of medicines foolishly administered, triumphs in a great number of cases, especially after the first explosion?



Besides, in sacrificing many beasts that assuredly would not have all died, is the duration of the epizootic really shortened?

“It has been proposed, instead of destroying the infected beast, to place him in some infirmary, at a distance from all possible communication with those that are sound, and to experiment on the power which different medicines or modes of treatment have on the disease. To a plan like this there can be no objection—no loss is sustained. Neither the country nor the individual proprietors will lose that which it is possible to save; and it is possible that, ere long, a method will be discovered of limiting the ravages of the disease, and possibly bringing it under the control of human skill.

“The power of *inoculation* has been much vaunted, founded on the supposed principle that an epizootic disease, once contracted, runs its course, but never attacks the same animal a second time. In addition to this is the advantage of being able to transmit the disease in its mildest form, diminishing the serious character of the disease, and rendering it curable in its very earliest stages, and thus preserving myriads of lives. Is inoculation so valuable as this? We shall see.

“In the first place, inoculation is only applicable to the contagious typhus of cattle, between which and variola or small-pox there has been thought to exist an analogy which is far from having been demonstrated. In our opinion, the cutaneous pustular eruption which is occasionally developed during the course of contagious typhus is only an epiphenomenon\*, which is occasionally, and yet somewhat rarely, observed in the course of the disease. In 1814 and 1815 we assiduously traced the course of this epizootic through a great extent of country; but neither did we, nor any of the veterinarians who kindly assisted us in our researches, meet with a single instance of pustular eruption. We do not conclude that these pustules might not occasionally be found, but that they are less frequent than some persons have imagined.

“In the second place, our observation does not confirm the assertion, that after cattle have been once attacked by the epizootic, they are never subject to the infection a second time. We could cite cases in which the epidemic has more than once attacked the same animal, both during the prevalence of the disease at one particular time, and when, at a distant period, it has again broken out in the country. Campert, Munnicks, Detlof, De Berg, Vicq-

\* An epiphenomenon is a symptom which is observed in the course of a disease, but the appearance of which is not necessary to determine the character of that disease.—Y.

d'Azyr, affirm that the epizootic, both natural and produced by inoculation, will render the cattle free from all future attack ; and yet Camper strangely cites a case in which six beasts that had previously suffered by it experienced another attack after inoculation, and Vicq-d'Azyr mentions a case which he regards as suspicious.

“A contrary opinion is maintained by Dufot, Courtirron, clinical professor at the veterinary school at Lyons, Girard, and Dupuy ; and in Italy by Leroy and Volpi. One circumstance must not be forgotten, and it goes far towards settling the question of inoculation. When that operation has been attempted, and succeeded, i. e., a pustular eruption has appeared on the cow, and no ill effects have followed, it was when the inoculation was effected at the time that the malady was worn out, and shewed an evident tendency to cease, while the results of inoculations effected at the commencement of the epizootic attack—at the moment when the virus had its greatest power—were serious and fearful, and often worse than the disease itself.

“The practice of inoculation as referrible to this disease ought, therefore, decidedly to cease, for it tends to favour the propagation of this epizootic, to perpetuate its existence, to augment instead of diminish the mortality, and, at all events, to introduce another disease as murderous as that whose ravages it professes to restrain.”

[To be continued.]

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## THE VETERINARIAN, JUNE 1, 1841.

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*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

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A MEETING of the following gentlemen, veterinary surgeons in Glasgow, took place on the 5th of April, 1841 :—

Mr. Sinclair  
 — Byers  
 — Moore  
 — Anderson  
 — Lea.

Mr. Sinclair was called to the chair.

The subject of the proposed Memorial to Parliament, for a charter in favour of the veterinary surgeons of Great Britain and Ireland, was taken into consideration. The Meeting cordially agreed with the proceedings of their English brethren for this purpose; and, being desirous of ascertaining more generally the views of the profession in this neighbourhood on the subject, resolved to call a meeting of veterinary surgeons residing in the west of Scotland.

Mr. Lawson, a veterinary student, who was also present, was requested to act as Secretary, and to draw out a circular to be addressed to the veterinary surgeons within, at least, twenty miles of Glasgow, requesting them to meet on the 23d day of April current, for the purpose of more fully deliberating on the matter, and resolving on the course they should pursue. The Secretary was also requested to forward to Mr. Mayer, of Newcastle, a copy of this minute, and to inform him that the resolutions of the adjourned meeting would likewise be communicated to him.

(Signed)      ARCHIBALD SINCLAIR,  
*Chairman.*

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*Glasgow, April 23, 1841.*

The following gentlemen, veterinary surgeons in the west of Scotland, were present: viz.

Mr. Sinclair, Glasgow	Mr. Dunlop, Airdrie
— Robinson, Greenock	— Anderson, Glasgow
— MacDougal, Kilpatrick	— Thompson, Beith
— MacKirby, Kingarth, Bute	— Moore, Glasgow
— Purdie, Hamilton	— Paton, Inchinan
— Allan Newton, Mearns	— Sproul, Paisley
— MacLean Glasgow	

Mr. Lawson, Veterinary Student, Sec.

Mr. Sinclair was appointed Chairman.

The Secretary read to the Meeting communications from Mr. Mayor, of Newcastle, regarding the proceedings of the Committee of Veterinary Surgeons in England, by which they were



much gratified, as well as letters of apology from various gentlemen who were prevented from attending this meeting by professional engagements.

Mr. Sinclair stated that a charter, beside conferring other benefits, would certainly place the profession on a more respectable footing, and advised the Meeting to enter into a subscription to enable the Committee in England to pursue those steps which might be necessary for obtaining it. This was agreed to after some conversation, and it was resolved that, as a commencement, the subscription should be 10s. each. This was accordingly done by all present, except Messrs. Moore and Dunlop, who had previously forwarded their subscriptions individually. Mr. Anderson subscribed for Mr. Donaldson, of Paisley.

The Secretary was requested, in forwarding the amount of the subscriptions to Mr. Mayer, to intimate that, if there was any likelihood of success and a deficiency of funds, they would come forward with additional assistance.

Mr. Anderson, Mr. Moore, and the Secretary were nominated a Committee to receive the subscriptions, and see to the forwarding of the sum collected.

The Secretary was also requested to inform the parties absent of what had been agreed to at this meeting, and that the money would not be forwarded for a fortnight from this date, in order to enable them to join in the subscription, if they thought fit.

A vote of thanks was moved, and carried with great cordiality, to Mr. Mayer and the Committee in England for their arduous exertions in the cause; and after a vote of thanks to the Chairman and Secretary, the Meeting adjourned.

(Signed) ARCHIBALD SINCLAIR,  
*Chairman.*

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It is with very great pleasure that we give insertion to these resolutions. It is pleasing to see the members of the profession north and south of the Tweed—and we know that there are many in the sister kingdom—so cordially uniting in the accomplishment of a noble object. There is but one feeling among them all—the improvement of their common profession, security from cer-

tain evils which now materially interfere with their respectability and their benefit, and the enjoyment of equal rights and privileges.

The English Committee is still hard at work. What progress they have made, or how far certain political circumstances may, for a little while, delay the accomplishment of their noble labours, it is not for us now to say. The good wishes of us all attend them.

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A part, and an unpleasant part, of the task of the Editor yet remains, and from which, as it concerns the honour of the Association and his own character, he must not shrink.

Mr. Fryer, in an Essay on Pneumonia in Cattle, delivered before the Association on the 9th of February, after giving a sketch of what he conceived to be the symptoms of the disease in those animals, proceeds to warn the young practitioner against placing too much reliance on the statements of "*book-makers*" concerning the "deathly coldness of the legs, &c." in cases of inflammation of the lungs. "Such things," says he, "sound highly in exaggerated descriptions, and serve well to round off a flaming period or sentence; but they are by no means so common in the yards of our employers as in the books of our authors: not that I mean to deny altogether the existence of this as a symptom of inflamed lungs; but I do assert, that it is by no means an invariable concomitant of the complaint in any of our patients." In another place he—a young man of the mature age of about twenty—says, "I am satisfied—practical experience enables me to speak thus firmly—that all that has been written by cattle pathologists on this subject is altogether conjectural, or arises from a fondness of theorizing."

The passage quoted by Mr. Fryer is taken from the work on Cattle, by the Editor, and consequently he was the person against whom this fearful diatribe was aimed; one who was engaged in the diligent study and practice of his profession more than a dozen years before his opponent was born—one whose zeal in the pursuit of veterinary science no one has dared to deny—one whom good feeling—so far as the Association is concerned—should protect from insult in his own house, and he is in

his own house here, for THE VETERINARIAN is his property, and the members of the Association have, at his invitation, done him the honour to occupy a part of it.

Where, however, is the mighty difference of opinion between him and Mr Fryer? They are speaking of the most frequent symptoms of pneumonia in cattle. Coldness of the extremities, the roots of the horns and the feet is one. Now, the Editor appeals from the rude and uncalled-for attack of a mere youth to the experience of every man well versed in the diseases of cattle. What is one of the earliest, the most striking, and the most invariable symptoms of pneumonia in cattle? Coldness of the extremities, decreasing in proportion as the treatment of the disease is successful, but, as the animal is sinking under the malady, becoming more and more intense, until the term *deathly* is scarcely too strong to apply to it. Mr. Fryer himself is compelled to acknowledge with regard to this symptom that "he cannot altogether deny the existence of it as a symptom of inflamed lungs, but that it is not an invariable concomitant of the disease." It is not. It does not appear until the disease has made some progress. It recedes or disappears when the inflammation of the lungs is subsiding; but it forces itself again upon our notice, and to its full extent, previous to the death of the animal, when that is occasioned by pure pneumonia. It is not, however, so marked, or it is scarcely apparent, when bronchitis or pleurisy mix to any considerable degree with the original disease.

The book-maker in describing pneumonia says that these animals will not lie down, and to this statement he adheres, although Mr. Mayer, a little mistaking the nature of the question put to him by Mr. Litt, acknowledges that "he has certainly seen them lie down." Many of them will frequently be seen to lie down. The beast will lie down when the disease begins to remit. He will lie down when his strength begins to fail; but while pure pneumonia exists to any considerable extent, *he will obstinately stand*. Here again the book-maker appeals unhesitatingly to the experience of every practitioner of some years' standing. The fact, however, is as Mr. Fryer states; that the horse is far more susceptible of pure pneumonia than cattle are. The ruthless labour exacted from him disposes these organs to more acute



disease, and that disease runs its course, prevented by its very intensity from mingling with any other.

Then why this violent and unfounded attack on the Editor of *THE VETERIARIAN*? Because he had devoted himself to the study of, and had ventured to unfold, so far as he had the power, the nature, causes and systematic treatment of the diseases of quadrupeds, and, following the practice of the best of our own surgeons, as well as those of the human being, communicated the result of his labours to his brethren and the world. Where is the practitioner, or, at least, where is the professor of human medicine, who has not done the same. Our Bells, our Coopers, our Coplands, have pursued precisely the same course with regard to the nobler branch of the healing art. What has been the consequence? In proportion as the knowledge of disease generally, or of particular disease, and the best mode of remedial treatment have been divulged, has the patient begun to think and to practise for himself, and has the medical man been dismissed? No! no!! far from it: but the sufferer, seeing that which concerns himself so accurately stated, forms a higher opinion of the medical profession, and eagerly resorts to the surgeon for information on many a point interesting to himself, and for assistance in the treatment of every disease.

So it is with regard to the practice of the veterinary art. The farmer or the gentleman has been accustomed to commit the medical treatment of his horses or his cattle to the care of the farrier or the leech, and he occasionally loses many a valuable animal. At length a work on the veterinary art falls in his way. He eagerly peruses it. He sees the cause of many an error and of many a loss; and he, perhaps, thinks a little of doctoring for himself; but, in proportion as he reads and acts, he finds one difficulty after another which he cannot unravel, and at length he goes—and he afterwards blesses the day that he did go—to some veterinary practitioner of acknowledged professional talent. His difficulties and his doubts are soon dispersed, and a union of interest and of friendship is formed between them which is rarely or never broken. An alliance is cemented, to which the man of foolish degrading mystery can never hope to aspire. Such would be the case with the profession generally, if a certain class of our practitioners could but see their true interest.

At no distant period I will enter more fully into this subject. At present I have only to say that, in my opinion, and, I believe, in his own too, Mr. Fryer has gone out of his way to commit a somewhat uncalled-for attack upon me. *I confess that I cannot compliment him or his Essay in the language of the Secretary*; but I feel towards him no ill-will, and shall be happy to render him any service that may, perchance, fall in my power.

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## VETERINARY JURISPRUDENCE.

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BROWN v. ELKIN.

*To the Editor of "The Veterinarian."*

Dear Sir,—Never having seen any account of this trial but what has appeared in the pages of THE VETERINARIAN, the following opinions are given on the faith of its being an accurate report.

Yours, &c.

E. A. FRIEND.

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I AM induced to notice this case for two reasons: one is the palpable injustice of the decision of the Court in this particular instance, and the other is the extraordinary effect it must produce upon the opinions of veterinary surgeons in future examinations of the horse. If this is to remain the established law on the subject, all cases where there is the slightest departure from the acknowledged order of perfection in structural arrangement must from henceforth be pronounced unsoundness, *without any reference to the future capability of the parts to perform their necessary duties*;—an injustice which all veterinary surgeons will at once perceive the effect of. There are numerous cases of this kind occurring in the examination of horses by veterinary surgeons, where it has hitherto been considered quite sufficient, even by the most deliberate and attentive, to point out the probability of danger, and where the warranty of soundness recommended has been supposed to be an adequate guarantee for the risk. But a new order of things must now be established, and all doubtful cases must from this time be unsound ones.

The ridiculous conclusion arrived at in this trial has arisen from the palpable neglect of making the necessary distinction between *cause and effect*. If this had been sufficiently impressed upon the attention of the Court, the verdict must have been different.

*Unsoundness is the cause. Lameness is the effect.*—A horse may be unsound without being lame, and lame without being unsound. Every departure from a healthy and normal structure which produces liability to lameness is *unsoundness*. This, then, is the *cause*.

Lameness is either an expression of pain, or an alteration of natural and healthy action, in consequence of mechanical disadvantage in motion. This is the *effect*.

Lameness destroys the value and usefulness of the animal; but the unsoundness I have mentioned may or may not terminate in lameness; hence the necessity of a warranty. The veterinary surgeon who gave his opinion on the trial (I am writing in utter ignorance of his name) said, in that guarded and careful way in which most veterinary surgeons do give their evidence (notwithstanding the sneers of Counsellor Henn on a late trial) "That curby hocks were not in themselves unsoundness, though they were a proof of a liability and tendency to unsoundness, and were a *sufficient defect* to warrant the return of any animal." Now, what was intended here? Why, that there was proof of a liability and tendency to *lameness*. "*The sufficient defect*"!! the unsoundness, did exist!! But the Court confounded the one with the other. I would have stated it then, and I do it now publicly (relying on the correctness of the evidence as to the formation of the hocks), that the horse was in reality as unsound at the time of the sale of him to Mr. Brown as he was when the subsequent lameness made it evident to every one. The abnormal structure existed then as a *cause*; and it is quite clear that Mr. Brown took a warranty from the seller to guard himself against the probable consequences which might be the *effect* of this abnormal structure, and which in reality terminated, as he suspected it might do, in lameness.

I have said that "a horse may be lame without being unsound." I will adduce an instance. Take the soundest horse in the world, and wedge a stone under the shoe, and you will have a lame horse; that is, he will exhibit pain and an alteration of his action; but no sophistry could induce the opinion that he was necessarily an unsound animal. And, on the other hand, in the case now before us, at the time of sale there was *unsoundness of formation*, producing the liability to lameness without any expression of pain being evinced, though there were sufficient proofs



that he was not capable of doing the work fairly expected from such an animal without producing those consequences which, as I have before said, Mr. Brown endeavoured to guard against by taking a warranty of soundness.

A warranty of this kind can be of no value whatever, except to guard a person from the consequences which may result from a cause which must have had a pre-existence.

I have written thus far boldly and fearlessly, because it is a subject on which I feel myself at liberty, from education and practice, to speak, and because I am writing for those who can appreciate both the motive and design; and further, because I have often lamented the vague way in which the expression *unsoundness* is made use of in a court of law—the distinction between unsoundness and lameness not being sufficiently insisted upon. What I have further to urge is written with due deference to the opinions of those who may be expected to know much better than myself. It was stated in the report, that Mr. Brown ought to have taken a different warranty. It appears to me (from the evidence) that, in conjunction with the general warranty, the hocks were especially mentioned as suspicious. I should have thought this quite tantamount to a special warranty of them.

## REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

**HIPPOPATHOLOGY, A SYSTEMATIC TREATISE ON THE DISORDERS AND LAMENESSES OF THE HORSE.** By WILLIAM PERCIVALL, M.R.C.S., *Licentiate of the Company of Apothecaries; Veterinary Surgeon in the First Life Guards; Author of "The Anatomy of the Horse," "Veterinary Lectures," &c.* Vol. II. Longman & Co.

WE have much pleasure in announcing the continuation of this noble work. The present volume contains an account of the Diseases of the Teeth—Pharynx and Œsophagus—the Stomach and Intestines—the Peritoneum, Liver, and Spleen—and of the Urinary and Genital Organs; comprising the most interesting

and important divisions of the author's labours. There is the same spirit of research—the same candour with regard to the sources whence he derives his information—the same beautifully clear arrangement and classical style of expression. It will do much to raise our profession in the estimation of the better class of our employers, and prepare us for that status in society to which we have a right to aspire, and which we are rapidly occupying.

It is difficult to select the disease in the description of which the author is happiest, and best displays his characteristic method of treating his subject. We take, however,

“PROFUSE STALING, which is only regarded in the light of disease when it amounts to much more in quantity than is natural, and continues for that length of time that the well-being of the animal is evidently affected by it.

“The causes of this must in general be sought for either in the provender the horse is consuming, or the water he is drinking. Dark-coloured, highly fermented, or mow-burnt hay; kiln-dried oats, or such as have been speared or become musty from lying long in heaps; barley that has been malted, and water having some mineral impregnation, are each and all of them to be viewed in the light of injurious agents, notwithstanding they are consumed in many cases with impunity.

“During the three years of occupation the British army continued in France, after the battle of Waterloo, Mr. Castley, V.S., 12th Lancers, had occur to him some well-marked cases of this description. They arose from the unwholesomeness of the oats served out to the cavalry, which were issued from stores where they had lain in such enormous heaps as, in a short time, not only to heat, but to become ‘literally half-rotten.’ This at one time caused diabetes (insipidus?) to a ‘frightful extent.’ Mr. C. endeavoured to check it by giving chalk in water. For common use, Mr. C. generally found the following formula satisfactory:—Take of powdered galls, alum, and bole, of each  $\mathfrak{z}\text{i}$ , ginger  $\mathfrak{z}\text{i}$ , and mix them in a quart of beer, or give them divided into two parts in balls, morning and evening.

“THE SYMPTOMS in ordinary cases attendant on these immoderate fluxes of urine are insatiable thirst, with, unless he be satisfied, a refusal to feed as usual; unhealthy appearance of the coat; dispiritedness; inability to bear fatigue; loss of flesh; debility.

“MR. STEWART, of GLASGOW, in a paper on the subject in *The Veterinarian* for 1839, describes two kinds of this disorder; one with, the other without fever and bronchitis, the symptoms in the latter case being those of fever, and bronchitis superadded. He also avers that he has seen the disorder occur when no cause for it was discoverable in the food.

“THE QUANTITY OF URINE voided in some of these cases is so great as to be quite incredible. The stall is deluged with the flow.

In an account of the disorder as it occurred at one time in France, Mr. Lassange informs us that 'the horses attacked voided five or six pints of perfectly clear urine every hour.'

"THE QUALITY OF THE URINE is that of an *urina potus*. It is thin and aqueous, and perfectly transparent. According to Lassange 100 parts of it contain of water 98.0; of urea, benzoate, and acetate of potash, acetate of lime, chloride of sodium, and free acetic acid 1.5; and of mucus and sulphate of lime, 0.5; making it to differ from healthy urine, 1st, in containing a larger quantity of water (for healthy urine has but seven-eighths of water); 2dly, in the presence of acetic acid, which is in part free; 3dly, in the absence of any earthy carbonate, which in healthy urine abounds.

"THE TREATMENT of these cases is in the majority rather dietetic than medical. Strict inquiry must immediately be set on foot into the nature and quality of the food the horse is eating, as well as into the kind of water he is drinking; one or both of which—unless any other cause can be shewn for the origin of his disorder—had better be immediately changed. Should the horse be attacked during the spring or summer season, a very desirable change would be from the stable to the grass-field; or when this cannot conveniently be done, soiling may be practised with advantage. Should the water appear to be the cause, and there be no means, or very great difficulty of obtaining any other kind, we may put a piece of chalk in the pail with a view of neutralizing, or rendering less harmful, the noxious impregnation.

"THE MEDICINES found most serviceable in this disorder are astringents and tonics. A ball I am fond of myself is composed of sesqui-carbonate of iron and prepared chalk, of each half an ounce, made up with syrup, and given once a day. Mr. Castley appears to have derived benefit from galls. Mr. Stewart speaks in laudatory terms of opium. He gives daily a ball consisting of three drachms of opium, and of catechu, gentian, and ginger, two drachms of each, made up with a little tar.

SHOULD ANY FEVER EXIST, such medicines, of course, become inadmissible. In their place moderate blood-letting and purging must be practised. In case the urinary disorder outlive the febrile one—which it will not often be found to do—recurrence may be had to the opiate and astringent medicines."

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## NEPHRITIS AND PARAPLEGIA, COMPLETE OR INCOMPLETE, ATTRIBUTABLE TO SANGUINEOUS CONGESTION.

*By M. BERGER, M.V. to the 5th Regiment of French Dragoons.*

THE affection of which I am about to speak has not only attacked some of the horses of the regiment, but it raged through the stables ; and before that it had affected many horses in the town and in the country, and which were constantly its victims on account of the delicacy of the organs which it attacked.

Although we are quartered in the North of France, and it will be some time before spring will arrive, nevertheless, we have some beautiful days, during which the changing temperature and the humid air considerably enfeeble the frame. In the department of *Pas-de-Calais*, and in the arrondissement of *Arras*, where we are now located, our animals—horses and cattle—are plentifully supplied with nutritious food, forming a blood rich, plastic, and abundant. They are also in nearly the state of idleness in which the winter has been passed, and there has been no preparation of the horse for the labours he is about to undergo—these things have combined to prepare his system for the destructive maladies which I am about to describe.

As to our troop-horses, a confinement to the stable far too long, and especially in the narrow boxes in which they are enclosed, gives them a gross habit of body, not to be attributed so much to the bulk of their food as to its stimulating nature—the activity of the digestive organs—the entire want of drain for so long a time, whether with regard to some of the natural excretions, or the absence of artificial depletion—the occasional partial asphyxia under which they labour—from the empoisonment of the air in their wretched habitations—an idiosyncrasy and peculiar temperament which is acquired in those places—all these things unite with other foreign causes to prepare for the diseases of which I am about to speak.

Between the 20th of February and the 22d of March in the last year, eight draught horses, some in the town and others in the country, were suddenly attacked by palsy, and especially when they were in the shafts of the carriage which they drew. All of them died in a greater or less space of time after the attack, but within the compass of six days. Of these eight victims, three were seen by us, and the others by M. Mannechez, veterinary surgeon of the town, and his colleagues. All of them were stout horses, fat, plethoric, and had been previously confined for a

greater or less time in the stable. Some of them fell almost immediately on going out of the stable—others after a long journey in which they had worked well; but not one of them had eaten from the time of his leaving the stable to the moment of attack. Until their death, they voided, from time to time, urine, varying in colour from brown to black. The respiration was much disturbed, as was the circulation. All of them had a painful tenesmus, and used the most violent efforts to evacuate their fæces, but in vain. They uttered plaintive cries and groans—their bodies were covered with a cold sweat, and yet some of them retained their appetite to the last. These symptoms continued to increase, excepting that they had a few short moments of remission.

M. Mannechez, who had seen many more cases of this kind than had fallen to our lot, believed that these attacks were always fatal, and certainly he had not succeeded in a single case. In the many post-mortem examinations made by him, he found that the envelopes of the spinal marrow in its lumbar portion contained an abundant serosity of a citrine colour, and sometimes gelatinous, and which he considered as the immediate cause of the palsy. Sometimes, but much more rarely, he found sanguineous congestion in these regions.

At the same period, many horses that had been fed and worked well, were destroyed by gangrene, with perforation of the posterior extremity of the floating portion of the colon, or to a certain extent of the rectum. The symptoms were, extreme anxiety—if the word may be used as expressive of any state of the quadruped—with very short remissions—the respiration laborious, precipitate, and short—the pulsations of the artery and the heart synchronous with the flanks—the eyes starting from their orbits—the alæ of the nose distended and immoveable—obstinate constipation—frequent straining without any evacuation—the anus hot and projecting—cold and abundant sweats about the prepuce and the thighs—hardness in the region of the kidneys—the penis pendant—frequent and violent efforts to expel a few drops of brown-coloured urine—emptiness of the bladder and the impossibility of retaining the smallest portion of an injection—continual looking at the flanks—lying down and immediately rising again—locomotion easy, and the utter loathing of food. The attack is sudden, and the progress of the disease most rapid—death supervening in twenty-four, forty-eight, or seventy-two hours at the most. All treatment useless.

*Lesions after death.*—Gangrene of all the membranes of some part of the floating portion of the colon or the rectum, about a hand-breadth in extent. In the abdomen a variable quantity of

citrine-coloured serosity. The peritoneum and the mesentery of a deep red colour, with a slight tint of yellow. The cortical substance of the kidneys softened, and of a deep colour, especially towards the outer surface, which was black. The ureters, the bladder, and the canal of the urethra in a normal state.

Such were the diseases which presented themselves to us when those which I am about to relate suddenly attacked some of the horses of our regiment.

CASE I. *Feb. 22, 1835. Acute Nephritis, terminating in Gangrene.*—A Norman horse, fourteen years old, in extraordinary condition, belonged to one of the officers of our regiment. He was seldom ridden by his owner, but always an hour every day by the soldier who had the charge of him. He had invariably the regimental ration, which, although small, might be considered more than sufficient, considering his little work, his state of fatness, and his age.

Early in the morning I was sent for by the person who had the care of the horses in the town. He reported that this horse had contracted a habit of moving about his hind legs while he was feeding, and that, for some days past, he had moved them more frequently and more rapidly. When mounted, he drew them up almost spasmodically. He had always disposed of his usual ration: but lately he had passed his urine with some difficulty, and always in his sheath. His countenance was as much enlivened as usual—he carried his head high—the skin, the hair, and the external temperature of the body were in their natural state—his hind limbs were slightly widened, particularly the left one. At irregular intervals he struck the ground violently with both his hind feet, so as to render it almost impossible to approach him. When he was calm and tranquil these fits of irritation returned in a moment if he was touched on the hind quarters. If it was attempted to lift one of his legs, he immediately threw himself down, and it was dangerous to approach him. He still retained his appetite; there was not any appearance of debility; the respiration was perfectly calm, but the pulse was full.

*Diagnosis.*—Irritation of the urinary passages, with some obstruction to the discharge of the urine, but no danger.

*Treatment.*—Gruel—emollient enemata. The soldier who had charge of him was directed to clean the prepuce thoroughly, which had not yet been done. Towards evening six pounds of blood were taken from the left jugular. The blood contained a considerable quantity of fibrine. At seven, a mash was offered to him, which he would not touch. He was perfectly quiet—his countenance did not indicate any suffering—there was not the slightest indication of pain.



At midnight we were summoned in haste, and the captain informed us that the patient had abandoned himself to various disorderly movements of the most alarming kind. He pawed the ground with violence, and we fully expected that the shoes would have been torn off—he snorted frequently, and sat on his hind quarters like a dog—the respiration began to be affected—the artery became hard, and rolled beneath the finger—the pulsations, without being frequent, were strong—the mucous membranes were not injected, and the animal had not lost his spirits. He was led to the infirmary—he staggered as he went—his hind legs were far apart, and only the tip of the toe bore any portion of the weight. His steps were short and precipitate; he, however, began to trot, without being urged to do so. A second bleeding of six pounds was effected, but the blood did not coagulate so readily as at first. The disease had now assumed a different character, and, being called upon for an opinion, I gave the following statement of my present view of the case.

*Diagnosis.*—Inflammation of the urinary passages, particularly of the kidneys.

*Symptoms.*—The patient disposes himself often to void his urine, without being able to accomplish his purpose; tenesmus, painful and accompanied with groans, without any alvine evacuations.

*Prognosis.*—More than doubtful.

*Treatment.*—A pint and a half of olive oil, and other emollients, were given in drinks and enemata—fumigations were employed under the abdomen, and a cataplasm occupied all the lumbar region and the flanks. The rest of the night was calm.

23d.—At 6 A.M., the disordered movements of the preceding night were repeated—the respiration and the circulation were quickened: he kicked so violently against the wall that was by the side of him that he knocked off the shoe from the left hind foot. This was the side on which the agitation was greatest, and where the leg was farthest from the centre of gravity. The body of the animal was inclined to the left, and he anxiously regarded his flank. The least manipulation on his flanks or genital organs produced fruitless efforts to urine or to dung.

A third bleeding of six pounds produced a momentary calm. We back-raked him to-day, that operation not having been satisfactorily done yesterday on account of his violence. The expulsive efforts were such that we could not penetrate farther than the middle of the rectum, except by availing ourselves of the momentary pauses that occurred. The heat of the intestinal canal was excessive; but we withdrew some hardened masses. The environs of the rectum were infiltrated and tumefied, and the mucous membrane slightly projected from the anus. The other treatment

was the same. The animal could not retain an injection for a moment, however small it might be.

At 8 o'clock he voided a small quantity of brown urine, and, shortly afterwards, a little dung after the most painful efforts, but they did not seem to afford him any relief.

From this time until his death these symptoms decreased in intensity and increased in frequency. The whole body was covered with a cold sweat. He fell, sometimes on the right side and sometimes on the left, and then scrambled up again, looking anxiously at his sides, and pushing his muzzle against them. The respiration was short and precipitate—the alæ of the nose widened and immovable—the pulse hard, and the artery scarcely yielding to pressure.

24th.—After another violent attack we subtracted 4 lbs. more of blood, and with apparent but very short relief. He discharged a pint of urine, and some hardened pellets of dung; but he was becoming weaker, and the perspirations were most violent and extensive.

25th.—He had been calm during the night, but at five o'clock A.M. he began again to plunge about. In order to afford him some relief, if we could, we opened a vein for the fifth time, and abstracted four pounds more of blood. He was calm for several hours, and then he fell from utter prostration of strength. The pulse was no more to be felt—the coldness of the body increased—and, at half past eleven o'clock, he died.

A post-mortem examination took place on the following day. The digestive organs were sound—the bladder, ureters, and urethral canal in their natural state; but the kidneys were diminished in size more than a third, and surrounded by a mass of fat. They were as black as ink, and softened to the point of falling to pieces by their own weight. The cortical substance was in a state of putridity, but the pelvis did not seem to be at all affected. The right kidney was more disorganized than the left. Nothing but accessory or secondary lesions were found in the other organs.

CASE II.—*March 1st.*—A horse five years old, in good condition, and not over-worked, exhibited the following symptoms. He was out of spirits—there was complete loathing of food—he was continually lying down and getting up again immediately—the breathing was short and quick—the pulse small—the artery distended—the mucous membranes of their natural colour—the mouth dry—the loins flexible.

He was put on a restricted diet—emollient injections were administered, which he did not retain, and friction was resorted to. The patient was costive. Towards midnight he lay down, and

was tranquil during the night, except that he frequently raised his head and looked at his flank. At five o'clock he began again to be uneasy, and the symptoms were more alarming than on the preceding night. Six pounds of blood were abstracted, but this did not afford any relief. The other means were continued, with the addition of a bottle of olive oil.

At noon he was again bled. An ounce of ether in a pint of cold water was given. It was necessary to give it by the nasal passages, and it was no sooner swallowed than a kind of crisis occurred. The respiration was as precipitate as it was possible to be, attended by a kind of snoring noise—the horse staggered against a wall, and appeared as if a fainting fit was coming on. This continued about a minute: when he became calm by degrees. Similar crises, however, continued to return; but they were not so violent nor so long, and every time that he seemed to recover from the fit he looked round mournfully at his flank. We opened the saphenas, for we were afraid of some sanguineous congestion of the colon or the kidneys. The blood ran very slowly, and we obtained between four and five pounds; but the animal was much agitated—the respiration was quickened and the perspiration was so frequent and abundant that it required four men to keep him dry. The patient made many vain efforts to void his dung, but only small portions of mucus escaped. Not a drop of an injection could be retained, and the urine—of its natural colour—was voided with difficulty, and a little at a time. We attempted, at two different times, to force on him two ounces of the syrup of opium; but it so exasperated him, and produced such dreadful spasms, that we were compelled to desist. In spite of his feebleness he could walk very well—his head, and eyes, and ears, and attitude, conveyed no impression of considerable suffering, but the movements of the flanks and the alæ of the nose announced some lesion of that portion of the nervous system which presides over respiration and the spasmodic motions of the limbs. The permanence and augmentation of the intensity of every symptom gradually wore the animal out, and he died at eight o'clock at night, just twenty-four hours from the commencement of the attack.

On examining him, very intense sanguineous congestion appeared through the whole extent of the mesentery. The mucous membrane of one part of the floating portion of the colon was also of a cherry-red colour. The ureters, the bladder, and the urethra were unaffected. The kidneys were blackened in several parts, and the cortical portion was softened to a considerable depth. The appearance of the right kidney shewed more disorganization than the left. The carcass was much puffed up, and there was a great tendency to putrefaction. The blood was



black, oily, and of the nature of pitch. There was also pulmonary congestion, which was well explained by the frequency and difficulty of respiration.

*Rec. de Méd. Vét., Fev. 1840.*

### DISORDER AMONG SHEEP.

[We extract the subjoined accounts from the *Mark Lane Express* of May the 3d and the 17th. Can they require one word of comment?—Y.]

*May 3d.*—His Grace the Duke of Rutland communicated to the Society the report of his farm bailiff, at the Belvoir Castle Farm, on a new disease which had, within the previous fortnight, appeared among the hogs of his Grace's flock of sheep, and which he regarded as distinct from any disorder he had ever witnessed. The animals appeared to lose their condition gradually during the course of a fortnight or three weeks, and then they died. The bailiff, on examining their livers, found them to be more or less affected, some of them having become so very tender as not to be able to bear their own weight, and in one case the liver was nearly wasted away: in none of the livers, however, were found any of the flukes that are so common in those of rotten sheep. The bailiff further stated, that the sheep had always fed on dry healthy land—that the hogs in question had not been attacked by the ordinary distemper, and that, a month ago, they were looking very thin, and, to all appearance, affected in the same manner as those which had died.

The following report on these symptoms was transmitted to the Council by Professor Sewell, of the Royal Veterinary College:—

“No disease exactly resembling that which has lately shewn itself in the Duke of Rutland's flock having been reported to the Society from other districts, it is requisite, with a view to ascertain its true character from the commencement, to select a few, and place them under the care of a veterinary surgeon for observation and treatment. To attain this object, three or four might be sent to the Veterinary College.

“The disease appears to terminate in a degeneracy of the structure of the liver, and, consequently, its functions; and probably originates in inflammation of that viscus.

“The variable temperature which has prevailed of late, and probably some peculiar state of the situation, may favour a tendency to the disease. A change of place and aspect, and food to

a certain extent, should be tried in the first instance—at least with those that appear to be affected.

(Signed) “WM. SEWELL,  
“Professor, Royal Veterinary College.”

*May 17th.*—His Grace the Duke of Rutland informed the Council that, agreeably with Professor Sewell’s suggestion, he had directed his bailiff to select three of the lamb hogs of the Belvoir Farm flock, which seemed, on examination, to be the most diseased among the fifty that were affected, and to send them by railway to the Veterinary College in London, in order that Professor Sewell might kill, and institute a *post-mortem* examination on one of these animals, with a view to ascertain the cause of the disease, and then apply the knowledge thus gained to his experiments in the treatment of the other two. His Grace farther informed the Council, that when the disease first appeared among the lamb hogs of the flock, the weather was exceedingly dry, but that *after a night of rain, which had occurred a fortnight ago, the mortality among them ceased at once*, and not one had died since, nor had the bailiff found it necessary to separate any fresh case from the flock!!

## RECIPES FOR THE PREVAILING EPIDEMIC.

“There is reason in all things.”

[We extract the subjoined papers from the *Waterford Mirror*. We confess that we read them with some degree of surprise. Mr. Ions’ reputation is too well established to need the questionable aid of a clap-trap like this: and, really, although we admire a liberal feeling and conduct towards our employers, this appears to us to be carrying the matter too far.—Y.]

*To the Editor of “The Mirror.”*

SIR,—In justice to Mr. Ions (proprietor of the veterinary establishment at Waterford), and for the benefit of society, I feel happy to give publicity to the judicious treatment of cattle seized with the prevailing epidemic, given by him gratuitously, by insertion in your paper. My stock, to the extent of thirty-seven head, unfortunately caught the contagion, and were treated agreeable to the underneath recipe of Mr. Ions’s with the most beneficial results, without being obliged to repeat the medicine in more than one or two cases. My labourers, calves, pigs, &c., made use of the milk, and the produce of two cows (whose udders were

inflamed) I gave separate to one calf, which sustained no injury. Still, where inflammation of the udder takes place, I should not be inclined to make use of the milk as food for man.

Should you think this statement worthy of insertion in your paper, I should wish it to appear in your next gazette.

I am, Sir, your obedient servant,

HUGH GREENE.

Snir View, Waterford, April 23, 1841.

P.S.—A horse kept in the same shed with cows did not take the infection. The remedy also answers for pigs.

#### EFFECTUAL CURE FOR EPIDEMIC IN STOCK, COWS, PIGS, &c.

*Wash for the Mouth.*—One ounce of alum to one pint of water, to be applied three or four times each day, with a sponge tied to a stick

*Wash for the Feet.*—One oz. and a half of blue vitriol to one pint of warm water, first having pared off any jagged part of hoof.

*Internal Medicine.*—A quarter of a pound of Glauber's salts dissolved in one pint of warm water; add one quarter pint of cold-drawn linseed oil, one oz. of sulphur, one drachm of ginger, being sufficient for one dose for a cow. To be repeated in eight or ten hours afterwards, should it not operate. Do not bleed; and the above is only intended to act gently on the bowels. Give the beast the most nutritious food—sliced potatoes, raw turnips, with strong gruel and steamed hay.

Half the above medicine will be sufficient for yearlings, and a quarter of the dose prescribed for a cow will answer for pigs, omitting for the latter animals the oil and ginger.

#### SMALL-POX IN THE DOG.

*By M. U. LEBLANC, M.V., Paris.*

VETERINARY surgeons do not, in general, study the pathology of the dog except as an inferior and accessory branch of their art. To this circumstance is to be attributed the chasm which we find in many works on animal medicine with regard to the diseases of this animal, and especially with reference to certain maladies that are not of very frequent occurrence.

Delabere Blaine is the only person who has published a treatise devoted exclusively to canine pathology.

I have in vain searched that treatise for any account of va-



riola in the dog, and I have only found that which Barrier writes in the “Instructions Veterinaires” for 1791\*.

\* The following is the Essay to which M. Leblanc refers. It is entitled “*Small Pox in the Dog*,” by M. Barrier, M.V. à Chartres.

Man, the sheep, the rabbit, and the ox, are not the only animals subject to the disease termed small-pox in the first, and *claveau* in the others. The dog is also exposed to it, and I have had the opportunity of observing it three different times. The following are the symptoms which presented themselves, and the treatment which I adopted.

On the first day the dog is dull, he carries his head and his tail low—his eyes are half closed—his muzzle is hot and dry—his tongue is coated, and his breath tainted—his pace is slow and staggering—he lies down continually, and can scarcely be induced to rise—he frequently vomits—he is constipated—his urine is high-coloured—his coat stares, and the hair readily falls off—his pulse is hard and frequent—and he is altogether changed in his appearance.

On the second day he passes much bilious matter by stool—his evacuations are dark, and very fœtid, or if the constipation continues to the third day, then comes diarrhœa, which cannot be stopped for two or three days. The animal is now evidently very ill, the countenance betraying his uneasiness and anxiety. He seeks for a cold situation—he leaves his bed, and stretches himself on the pavement. A perspiration, seldom seen in the dog, breaks out abundantly, and wets the place on which he lies.

Towards the fourth day, shivering fits come upon him. His hair, especially about the head, stands upright, and on that or the following day the head becomes covered with pustules. They spread over every other part except the back and sides, where there are, comparatively, few; but they are found on the lips, the muzzle, the eyelids, the vulva, the anus, the prepuce, and between the toes. The animal walks with difficulty, and cries as he walks.

These pustules are precisely those of small-pox, or *claveau*. They are first red, then white; then they suppurate, and dry, and fall off.

The eruption is characterized, as in sheep, by its mildness or its confluent form. In the first, a hound four years old, it was nine days before it was fully out. In the second, a wolf-dog, whose health was scarcely affected by it, it quickly appeared, and as quickly dried away. In the third, a Danish dog of four months, it was not fully out until the eighteenth day, and then it was confluent.

These animals were kept on broth and milk. Vinegar and camphor were administered, but then the milk was omitted—injections of broth and vinegar were thrown up—nitre was sometimes given—and a purgative when the scabs began to fall off.

M. Barrier adds, that this is not the only case of small-pox in dogs. “*Les Ephemerides d’Allemagne*” make mention of a dog that caught it from a person with whom he slept, and M. Huzard relates the following fact:—Some sheep died of the clavelée, and were left in a ditch. A pack of hounds passing, began to devour the carcasses; and seventeen of them became ill.

It was at first thought to be the distemper, because they lost their spirits, became weak, paralytic in the loins, and discharged from the nostrils a viscid and green humour: but a plentiful crop of inflammatory pustules soon appeared, and proved the disease to be malignant small-pox. Eleven of them died, and the helper at the kennel fell ill, and had his hands and face covered with pustules.

M. Barrier then speaks of a monkey who caught the small-pox from some children with whom he was accustomed to play; and of another who caught the measles from a child on whose bed it was accustomed to lie. It had all

I should also add a short account by Hurtrel d'Arboval, in his Medical and Surgical Dictionary, of an eruptive disease that occurred in the veterinary school at Lyons, which was propagated by contagion, and to which the name of small-pox was given. It is unfortunate that this malady is not at all satisfactorily described\*.

The variola of the dog is, nevertheless, not a rare disease; at least it has often come under my observation, and I do not think that I am singular in this respect. It has much analogy to the small-pox of the human being, and the *clavelée* of the sheep. Barrier has very fairly described it, except that he has insisted too much on the accessory symptoms, and neglected the essential ones. These accessory symptoms are exceedingly variable: the greater part of those which Barrier mentions are also of rare occurrence, and they are very far from appearing in the order in which he has described them. I have never had the opportunity of seeing many of them. My advice is, that in our description of the variola of the dog, it would be better to neglect these acci-

the symptoms of measles except the cough, and, instead of that, there was a violent heaving at the flanks. The same medicine was given to it as to the children: the eruption and its disappearance were precisely like those of the human being.

M. Barrier quotes this from Paulet's History of the Small-pox; and he mentions one circumstance that, I apprehend, stands quite alone in medical history. The pulse of this monkey—a very small one—could scarcely be reckoned on account of its rapidity; but at length, examining it at the axillary artery, he found it to be about 400 per minute.—Y.

\*The passage in Hurtrel d'Arboval is as follows: "In 1809 there was observed at the Royal Veterinary School at Lyons, an eruptive malady among the dogs, to which they gave the name of small-pox. It appeared to be propagated from dog to dog by contagion. It was not difficult of cure, and it quickly disappeared when no other remedies were employed than mild aperients and diaphoretics. A sheep was inoculated from one of these dogs. There was a slight eruption of pustules around the place of inoculation, but nowhere else; nor was there the slightest fever. It is to be regretted that some other experiments had not been tried on this and other sheep."

At another time, and also at the Lyons school, a sheep died of the regular sheep-pox. A part of the skin was fastened during four-and-twenty hours on a healthy sheep, and the other part of it on a dog, likewise in apparent good health. No effect was produced on the dog, but the sheep died of confluent sheep-pox.

Paulet, in his valuable "*Recherches sur les Maladies Epizootiques*," speaks of what he calls *la clavelée* in turkeys and geese, but altogether a different disease. "It is manifested principally at the head and neck by the appearance of inflammatory tumours of different forms—sometimes as large as a pigeon's egg, which change into abscesses, with profuse suppuration and destruction of the neighbouring parts, and in this case the ultimate destruction of the patient." This is an aggravated form of that mysterious and misunderstood and murderous disease, *the pip*. Vol. ii, p. 343.

I am collecting these passages, so far as my limited reading will supply them, in order to enable us to form a more correct opinion of the theory which M. Leblanc adopts in the very ingenious paper which we are now translating.—Y.



dental symptoms, to which we may apply appropriate remedies when they appear, than to pass over in silence the characteristic symptoms.

I have remarked with Barrier, that the constitutional disturbance preparatory to the appearance of the eruption lasts during five or six days, and is common to a great many diseases. They are loss of spirits and appetite, dryness of the mouth and muzzle, heat of the skin, frequency of the pulse, staring of the coat, shivering, vomiting, discolouration of the urine, and constipation.

The essential symptoms succeed in the following order. The skin of the belly, the groin, and the inside of the fore-arm becomes of a redder colour than in its natural state, and sprinkled with small red spots irregularly rounded. They are sometimes isolated, sometimes clustered together. The near approach of this eruption is announced by an increase of fever.

On the second day the spots are larger, and the integument is a little tumefied at the centre of each.

On the third day the spots have enlarged, and the skin is still more prominent at their centre.

On the fourth day the summit of the tumour is yet more prominent. Towards the end of that day the redness of the centre begins to assume a somewhat grey colour. On the following days the pustules assume their characteristic appearance, and cannot be confounded with any other eruption. On the summit is a white circular point, corresponding with a certain quantity of nearly transparent fluid which it contains, and covered by a thin and lucid transparent pellicle. This fluid becomes less and less transparent, until it acquires the colour and consistence of pus. The pustule during its serous state is of a rounded form. It is flattened when the fluid acquires a purulent character, and even slightly depressed towards the close of the period of suppuration, and when that of desiccation is about to commence, and which ordinarily happens towards the ninth or tenth day of the eruption. The desiccation and desquamation occupy an exceedingly variable length of time, and so, indeed, do all the different periods of the disease. What is the least inconstant is the duration of serous eruption, which is about four days, if it has been distinctly produced and sheltered from all friction. If the character of the pustules is considered *en masse*, it will be observed that, while some of them will be in a state of serous secretion, others will only have begun to appear.

The eruption terminates when the desiccation commences in the first pustules; and if some red spots should shew themselves at that period of the malady, they disappear without being followed by the development of pustules. They are a species of aborted pustules. After the desiccation of the pustules, the skin remains



covered by brown spots, which by degrees die away. There remains no trace of the disease, except a few superficial cicatrices, on which the hair does not grow.

[To be continued.]

## A CASE OF ABNORMAL PALPITATION OF THE HEART.

*By M. PASTEY, Délivrande.*

IN the night of November the 19th, 1836, I was desired to visit a colt, thirty months old, and in very fine condition. He had been attacked in the morning with violent colic, from having eaten a great quantity of oats that had been given him by mistake; and for the cure of the illness produced by this an empiric that was sent for had ordered walking exercise, injections, and emollient drinks.

The affection, far from yielding to the treatment, good or bad, of our cyclops, had augmented to such a degree of intensity, that the proprietor was perfectly frightened, and sent for me.

On my arrival, I found the animal in a great state of suffering, which he evinced by abandoning himself to the most violent struggles, whether he was standing or lying down. His body was covered with perspiration, which rose from him in the form of a dense cloud—the abdomen was enormously distended, and was at once elastic on pressure and little sonorous on percussion—the mouth was hot and dry—the bowels confined—the respiration dreadfully laborious—the conjunctival and other mucous membranes highly injected—the pupils dilated—the forehead particularly hot—the limbs very cold—the pulse quick, and yet sufficiently developed—a retrograde movement, or venous pulse of the blood in the jugulars.

On pressing the youth that had the care of these animals, he acknowledged that the colt was always greedy for oats, and that he had given him five or six times more than his usual allowance.

After obtaining this intelligence, I immediately prescribed an ounce of ether in water, and repeated it after an hour, giving saline and soapy injections, with dry friction on the carcass, and irritating embrocations on the legs, alternating this with walking exercise.

Two doses of the ether had been given, but the disease continued to increase. The horse, whose stomach still remained gorged with oats, refused obstinately to swallow any great quantity of fluid. This, in conjunction with the volatilization of the ether, occasioned a considerable inflation of the abdomen, which

sadly interfered with the respiration, and caused much stupidity and heat about the head.

I practised a moderate bleeding, and applied an embrocation to the belly, composed of thirty drops of the croton oil with three times the quantity of brandy, continuing the injections, the frictions, and the walking exercise.

By the bleeding—perhaps despairing of the case—I hoped that I might remedy or prevent the complication, possible and even probable, of congestion, either isolated or simultaneous, of the lungs, or the brain, or even of the intestines, the peristaltic motions of which I was endeavouring to stimulate or increase.

The horse, that was evidently worse for a little while after the bleeding, did not fail to improve under this treatment at the expiration of two or three hours, and on the following day he was apparently out of danger. We, however, continued his gruel, and injections, and other remedial measures.

Three days afterwards, when I had thought of discontinuing my visits, the owner sent for me again, saying that the horse was worse, and heaved violently at the left flank.

When I arrived at the door of the stable, and on the left side of the horse, I indeed saw a singular and quick and violent heaving of his clothes. The whole of the vertebral column and particularly the head, participated in every motion. I stripped off his clothes, and was astonished at the singular and altogether new phenomenon which presented itself. I placed my hand on the flank, posterior to the last rib, and where the pulsation was most evident, and it was again and again beaten off by the force with which the frame was agitated.

These tumultuous beatings were confined exclusively to the left flank, not having behind the elbow where the beatings of the heart are usually explored any thing but a somewhat more direct *echo* of the movement that was impressed on every part of the frame. Neither by hand nor my ear could I detect the presence of this viscus in the situation which nature had allotted to it in the thorax; but at the flank it was fearfully palpable. One would have said that the heart, deprived of its envelopes, the natural bonds which retained it in its position, and, in a word, having burst from all its connexions, had found its way through the diaphragm, and placed itself in the abdomen, on the inside of the left flank.

The symptoms which accompanied this phenomenon were loathing of food—depression of spirits—a mouth dry, hot, and exhaling the odour of imperfectly digested food—the conjunctiva rather red than pale—the pulse 60 in a minute, isochronous with the beatings of the flank, well developed and regular—the flanks a little more flexible than on the preceding evening—the coat smooth, and the animal walking a little way with apparent ease.

*Treatment.*—I effected a new bleeding of 6 or 7 lbs. at the jugular, and ordered emollient injections to be frequently administered, and two drachms of powdered digitalis to be given in a linseed decoction, and to be repeated on the following morning. All the symptoms which I described had then lost their intensity. Gruel and frictions were continued during the two following days, when the horse had perfectly recovered, and the abnormal beating of the flank had disappeared to regain its natural position in the chest.

Some days after the cessation of these palpitations the horse was attacked with pneumonia, supervening on neglected bronchitis. He was treated in the usual way, and perfectly recovered; and, since that period, April 1837, he has not had the slightest illness.

Judging from the commotion which pervaded the whole machine, and the state of anxiety and difficult breathing which this animal exhibited, it would seem that this series of symptoms, which seemed more alarming than they were in fact, were not incompatible with an organic lesion of some of the principal viscera. I asked myself "Was the pericardium ruptured? Were the large vessels, and the membranes which suspended the heart, elongated? Did it thus occupy the posterior extremity of the chest, for into the abdomen itself it certainly had never passed? Were these abnormal affections produced by any of the medicines which I had administered—by the croton oil which was given? Was it a species of reaction after the derangement of the stomach and intestines effected by their over-distention with food? These and many other questions occupied my mind, and I was still at a loss to explain the cause of this strange phenomenon, which I regard as unique, at least so far as I know, in the annals of veterinary science. Whatever was the cause, I attribute much efficacy to the influence of the digitalis, in gradually causing this disturbance to subside.

*Mém. de la Soc. Vét. du Calvados, 1837.*

## ON THE USE OF CLOVER (*TRIFOLIUM PRATENSE*), AS FOOD FOR COLTS.

*By M. G. CANU, Torigny (Manche).*

THE meadow trefoil (*trifolium pratense*), occupies almost the whole of the artificial meadows in the country which I inhabit. A great portion of it is eaten green, the rest is cut as hay, and stored in the barns as winter-food. Almost all animals eat it greedily, and prefer it to every other kind of food. The farmers, also, believing that it is the most nutritious food that can be offered to their cattle, give it largely to those whom they wish to fatten



or to keep in good condition. They do this with considerable advantage when the cattle are aged, or their teeth are wearing out; but it is not the same with colts from six to thirty months old. When it is the principal or almost the only food given to them, it produces an inflammatory disease, characterised by certain almost invariable symptoms, and which is dangerous in proportion as the animals are young and highly bred. The colts, from the month of March to that of December, generally obtain no other food than that which they find in the meadows; and it is in the months of December, January, and February, that this disease is most prevalent. The colts in their first year, or who have not exceeded it by above a couple of months, oftenest contract it.

A colt, six months old, for which 300 francs had been already refused, was seized with it, and the symptoms so much resembled those which occur in the generality of cases, that I select this colt as an example of the rest.

I was sent for to see it on the 7th of January, 1834. On the 5th he had been dull.

On the 6th that dulness increased, and his appetite began to fail. The proprietor, thinking that it was merely some trifling and passing indisposition, gave him some white water several times. He took it eagerly, but at night he refused all food, even bread.

7th.—The same symptoms continued, with the addition of others. The eyelids were a little swollen and half closed, and the conjunctival membrane was injected. The owner had bled him at the bifurcation of the jugular, and abstracted four pints of blood. He now came in search of me. The symptoms were so manifestly those which characterise this disease, that I immediately told the proprietor that he had been giving the horse trefoil, and that this was the cause of the malady. He had, in fact, been giving it three or four weeks. The attitude of the animal was expressive of pain—the head hanging down—the eyelids swollen and nearly closed—the conjunctiva highly injected, and of a deep yellow colour—the mouth hot and dry—the ears sometimes cold, and sometimes hot—the pulse small, but frequent and hard—the belly tender, especially on the right side—the urine small in quantity and oily—the dung round and hard—a staggering gait, principally referrible to the hind legs, but connected with general prostration of strength, and, at the same time, giving an idea of vertigo, and vertigo being, in fact, the general winding-up of the malady, if medical treatment was not resorted to in time.

I was well aware that an antiphlogistic treatment well followed up gave my patient his only chance, and that it succeeded often and more speedily than we could at first dare to hope; therefore

I abstracted three pounds of blood from the jugular, and recommended a severe and restricted diet. Every second hour some barley gruel was given, with honey and a small portion of nitre. Four emollient injections were also daily administered—gentle hand-rubbing was applied—warm clothing was ordered, and a little walking exercise if the weather permitted.

9th.—Much better. The eyes more open and less swollen—the head better carried—the walk more assured, and the appetite returning; in fact, the intensity of every symptom was diminished. I began cautiously to increase his food; and on the 14th he was perfectly well. He was dismissed, with a caution to give him no more dry trefoil.

The symptoms of this disease vary but little, except that, sometimes, the lips and nostrils are tumefied as well as the eyelids, and the dejections are somewhat less hard and yellow. Obstinate constipation, however, is one of the most common symptoms. It is or ought to be seldom fatal, for the indications of disease are sufficiently evident at a very early stage.

In January 1832, I fortunately had the opportunity of a post-mortem examination of a filly, to which I was sent for at the very close of the disease, and who died before I could arrive at the farm. There were traces of very acute inflammation in the intestines. The mucous membranes were of a deep-red colour, and especially in the duodenum. The liver was very much enlarged, a little pale, and easily penetrated by the finger. It was easily reduced into small granules, as if it had been boiled. I had not instruments with me that would enable me to open the cranium.

A LIST OF THOSE WHO HAVE OBTAINED THEIR DIPLOMAS  
AT THE ROYAL VETERINARY COLLEGE.

(Omitted) Nov. 1840.

Mr. E. S. Grey, Edinburgh.

May 5th, 1841.

Mr. Edward Sansom, Preston, Lancashire.

Mr. Felix Delany, Dublin.

Mr. Daniel Sayer, Norwich, Norfolk.

Mr. William Ellis, Hempnall, Norfolk.

May 19th, 1841.

Mr. John Fryer, Kirby Fleetham, York.

Mr. Charles Wills, Belfast.

ERRATUM.

P. 352, line 7, for "and lame," read "but not lame."

THE  
VETERINARIAN.

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VOL. XIV, No. 163.]

JULY 1841.

[New Series, No. 103.]

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RESPIRATION,

ITS MECHANISM AND CHARACTERS ABSTRACTEDLY CONSIDERED.

*By Mr. R. PRITCHARD, V.S., Wolverhampton.*

[Continued from page 313.]

I STATED, in my last paper, that the situation of roaring, as an ordinary affection, was in the larynx. That obstruction in any part of the respiratory tube may produce a roaring respiration, I do not for one moment question; but the larynx alone is the seat of that alteration of structure productive of the impediment and abnormal sound in horses designated and commonly understood by the appellation *Roaring*. All other cases are irregular and irrelevant to our inquiry. The larynx is the sound-box whence proceeds the healthy, soft, and natural blowing sound of respiration, and which I will term, for the sake of distinction, the *Laryngeal murmur*—also the voice of the horse, as neighing and whinnying.

The different intonations are effected by the movements of the larynx upon the air in its passage through it. Those movements over which the animal has control enable him variously to modulate the sounds of his throat; and it is easy enough to conceive that very slight changes in the position, extent, and capacity of the larynx are capable of producing an audible difference in the character of the note or sound emitted.

Topical inflammation of so low a grade of intensity as scarcely to be recognized as existing in the mucous surfaces of the glottis occasionally produces irrecoverable changes in the caliber of the passage; and, sometimes, progresses very slowly, so that for a considerable period the horse's defect either escapes detection, or he is only suspected of being *not quite right in his wind*. It is only by men who have had much experience, and paid the subject close



observation and attention, that such cases are discoverable. This change of character which is observable in the animal's breathing consists of an inequality or disproportion between the inspiration and expiration, the former having increased in extent is comparatively prolonged, and the laryngeal murmur has, at the same time, lost much of its softness, and become sharp and shrill to a certain degree, or, in a very slight quality, sonorous. Horses that have the laryngeal murmur shrill become *whistlers* as the change in respiration advances. Those in which the quality of the murmur is sonorous become *roarers*.

There are more horses labouring under this preliminary respiration to roaring than is commonly supposed; and, as is often the circumstance, when lost sight of for a time, they are found by their owners or attendants to have become whistlers or roarers. Such being turned out for a summer's run at grass, on coming again into work, the disease is so far developed as to leave no doubt upon the matter to an ordinary judge; and the cause of the disease is attributed by the parties to the turning the horse out, but which, in fact, had no share whatever in the affair.

Topical inflammation of the larynx of an acute kind will frequently produce a roaring inspiration in twenty-four hours; and although, on resolution of the disease taking place, no ill consequences remain, it so frequently happens that *whistling* or *roaring* is the result, that great and considerable apprehension of such effects are entertained by most practitioners. But few veterinary surgeons, I imagine, would feel the same anxiety as to bronchitis or simple catarrh terminating in *whistling* or *roaring*, because such effects are rarely observed; indeed, active inflammation of the mucous surfaces of the trachea and bronchi is not accompanied by any manifest painful hoarse sound in respiration, so common in laryngitis. These are important facts relative to the seat of *roaring*. The hoarse roaring sound in laryngitis principally arises, in my opinion, from a partial closing of the glottis by the epiglottis—nature's attempt at relief from acute pain by exclusion of the cold atmospheric air in inspiration; also from a comparison of the sounds produced by laryngeal inflammation and the sonorous ejaculation of the confirmed *roarer*, I am forcibly impressed with the belief of this partial shutting down of the epiglottis as a principal cause of the sound uttered by *roarers* in aggravated cases.

There are instances of horses that were loud sonorous *roarers* presenting no satisfactory lesion on dissection for the malady. Such were probably of the above class, from a loss of nervous influence in those laryngeal muscles particularly concerned in maintaining the proper degree of dilatation of the aperture, viz., the

hyo-epiglottideus, thyro-arytenoideus, and crico-arytenoideus lateralis;—the first muscle as the principal agent in elevating the epiglottis, and the other two enlarging the glottis by separating the arytenoid cartilages. An increased degree of irritability in the aryteno-epiglottideus and thyro-epiglottideus muscles, producing an irregular contraction of them, by which the epiglottis may be partially depressed at a period of the respiratory process when its full elevation is essentially required, would produce a similar obstruction to respiration.

The vessels and nerves distributed to muscles must be sound for the due performance of their contraction. Any obstruction or defect in the circulation either of the blood or nervous fluid supplied to them is attended with a proportionate change of function. A mediate state of total paralysis or of complete spasm, existing in the laryngeal muscles arising from an alteration in the nerves or bloodvessels, would change the laryngeal murmur to *whistling* or *roaring*.

The late Mr. John Field experimented on the muscles of the larynx by dividing the recurrent nerve of the par-vagus on one side, and found the animal, immediately after the operation, to be a roarer in a very extensive degree, and his breathing very difficult. His respiration afterwards got better; but at the end of four years he was still a bad roarer, and, on dissection, presented a wasting of the laryngeal muscles on the side operated upon.

The loss of substance in the muscular structure in this instance arose from the deprivation of the nervous influence, and not, as is by some conjectured, in consequence of an inactive state of the muscles. The cause of *roaring* was plainly a palsy of the dilators, and consequent collapse of the larynx on that side. The effect upon the respiration was much the same as arises from the thickening of the lining membrane of the larynx—a contraction and diminution of the passage, which is the true and real cause of roaring in all its modifications.

The laryngeal nerves supply the constrictor muscles of the larynx with motor power; the recurrent branches those of the dilators: all proceeding from the par-vagus, yet supplying antagonist muscles with power of motion; and so beautifully adjusted is the balance between them in their normal action, as to admit of no inconvenience or hindrance to the free and easy admission and expulsion of air to and from the lungs. But should the nervous influence be increased on the one hand, or diminished on the other, the mutual relationship in operation between them is impaired; and an alteration in the laryngeal murmur is the consequence. This condition of the muscles may exist with or without apparent change of structure in them; but undoubt-



edly depending upon the extent to which the unequalization of nervous influence has advanced. Hypertrophy or atrophy or both may result to the laryngeal muscles from an irregular distribution of the nervous stimulus.

It is common to say, that the wasting of the muscles arises from loss of action in them, consequent on some unfavourable position of the head and neck being maintained for some considerable period; and that the hypertrophic state of the opposite muscles proceeds from increased action in them, owing to the suspended condition of those that are atrophied. For my own part, I cannot very clearly observe any position of the head, however long it may be continued, that could produce such effect upon the muscles of the larynx, so long as respiration is carried on with natural vigour. Compression of the neck by the cribbing-strap would, on a first view, appear more feasible: still, this strap is never applied so tight as to interfere with the horse's respiration; and, what is more opposed to such an opinion, is the fact of animals so treated not becoming roarers in consequence. Some few doubtful cases may be brought forward in support of it; but that numbers of horses have worn the neck-strap for a very long time and not become roarers is a well-established fact.

Every part of the frame is preserved in its healthy proportion by the influence of its vital endowment, which keeps up a continued vital attraction of molecules from the blood, and these in quantity sufficient to replace such of those particles as have lost their vital affinity, and are carried away by a process of absorption. The process of formation of parts from the blood, and the removal of particles, by absorption, which are no longer useful to the purposes of structure, is liable to be disturbed in its progress. When the vital influence of a muscle or other structure is proceeding with activity, the attraction of the nutrient particles from the blood, similar to those of the tissue they are to constitute, is vigorous and extensive, separating a greater number of the molecules, depositing them in closer affinity, and the substance of the part becoming augmented. Should, however, the extent of the vital endowment be diminished and weakened, then the vital attraction is comparatively languid, the affinity existing between the molecules is rendered weak, and their removal by absorption proceeds quicker than in health, and more rapid than they are deposited—thus the muscle or part wastes, or becomes deficient in its constituent particles, or atrophied.

The healthy function of a muscle, together with its proper proportions, is dependent upon an equilibrium being maintained between the influence of attraction and vital affinity; and upon the due supply of nervous power and the vigorous state of the circula-



tion. The first alteration in an atrophied muscle is a diminution of the volume of blood supplied to it—next a paleness of colour consequent on the loss of blood. As the change advances, the disorganization increases, the bulk diminishes, and may proceed to an entire loss of the part; but, more commonly, this state is much modified. Hypertrophy of the muscles commonly arises from increased action or function, which is to be considered purely physiological: thus the loss of action in one set of muscles occasions increase of function in others. The muscles in the arms of a blacksmith are strongly formed, while those of his lower extremities are imperfectly developed, from the standing behind the anvil limiting their action. But this solution of the phenomena in the above muscles does not aptly apply to the change in the muscles of the larynx; the direct stimulus of exertion is continued on the one hand, while that of organic function is the influence on the other. Obliteration of the nervous current in one branch gives rise to increased power in that of the opposite nerve, in the same manner as the loss of an arterial trunk gives rise to enlargement of the collateral vessels.

The earliest and most essential change in a muscle or part that is hypertrophied is an obviously excited or augmented organic nervous influence. Powerful muscular contraction and increased vascular determination are produced by it; and excess of the nutritive principle and increase of bulk is the general result.

It is necessary to hypertrophy that the distribution of blood to the part should be augmented, and that the nutritive molecules be superabundant; but this state of the parts is dependent upon the excess of organic nervous power. The same states of vital attraction and power of affinity extend to the muco-membranous and submucous tissues; and this condition may occur in those structures, independent of topical inflammation. When the distribution and function of the par-vagum, or, as Mr. Youatt very properly defines it, "cerebro-visceral motor nerve," is viewed throughout all its relations, it is easy to conceive the origin of these forms of lesion obtaining in the different tissues constituting the larynx, to be frequently seated in the digestive and assimilating organs; arising out of a species of gastro-enteric irritation with hepatic disorder, commonly produced or established by unwholesome and injudicious feeding; and by exertions of the animal during those states of surcharge of the abdominal viscera—unequal exertions to which the horse, of all other animals, is so frequently subjected. The intensity of the irritation alluded to is not of that high grade as to manifest its existence by signs of acute suffering: notwithstanding, however, that horses do endure a very great deal of inward pain without por-

traying it by any very remarkable outward signs, is a circumstance of ordinary occurrence. But irritation of the stomach, intestines, and liver, likewise take place of that degree of force and activity, and which is prolonged and kept up for a considerable time, undefined by any limits of duration, and productive of very important effects on the ganglionic nervous system and the cerebro-spinal axis.

Between the alimentary digestive tube and the respiratory organs there is a nervous relationship, by which an association of sympathies is maintained, and a co-operative influence preserved of the highest order in the animal economy. Disorder of the digestive mucous surface in association with affections of the organs of respiration, is a complication of morbid changes daily illustrated in veterinary practice. Catarrh, bronchitis, and pneumonia are complications of the active forms, and chronic cough, verminous cough, and broken wind are of the sub-acute order, serving to evince the complication of disorder existing between the respiratory and digestive and assimilating organs.

It is through the operations of the nervous system primarily, and the circulating system secondarily, that we can explain two important facts relative to roaring, viz., the hereditary transmission of the malady from the parent to the offspring, and the circumstance of tall horses with long necks and extended forehands being more the ordinary subjects of it than those of conformation just the reverse. Every horse-dealer is acquainted with the latter particular, and has his suspicion always awake to the event in purchasing lofty horses with ranging forehands; while with the horse of short stature and compact conformation he is less apprehensive of the affection. The hereditary predisposition to roaring is dependent upon original conformation. It is not to be supposed that the foal comes into the world with the disease existing in a latent form, and ultimately developed by the various exciting causes; but it is generally observed that the offspring resembles the parent in conformation, constitution, temper, and disposition to disorder, whether of structure or function. Many horses in stable treatment are subject to cough from slight exposures to variable temperature, from which others would suffer no inconvenience. Others have active inflammation in the mucous and submucous tissues of the larynx, followed by resolution and perfect restoration of those structures to their normal condition. Not the least alteration in the laryngeal murmur is the consequence; but with others, on the subsidence of the increased vascular action, a contraction of the laryngeal passage is found to have taken place, and roaring or whistling is permanently established.

Some one has said that mares are seldom roarers ; but twenty years and upwards of observation and experience have convinced me that mares possess no immunity from the affection, and are as often the subjects of it as horses or geldings. Such an opinion could have had no proper ground for its foundation, either theoretical or practical.

I have been more prolix on the important subject of respiration than I at first intended ; but it possesses so much interest to the veterinary surgeon, and demands so much of his skill and talent, that I flatter myself the readers of *THE VETERINARIAN* will forgive me, and permit me once more to occupy a few pages of that valuable work.

[To be continued.]

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## ON THE ABSORPTION OF THE OPAQUE CAPSULE OF THE CRYSTALLINE LENS.

*By* WM. W. COOPER, *Esq., Surgeon to the Hon. Art. Com.*

MY attention was attracted to a paper by Mr. Cartwright, in the last number of your periodical, upon the question as to whether or not the opaque capsule of the crystalline lens is capable of being absorbed after the removal of the lens itself. Mr. Cartwright supports the opinion of its absorbable nature, and quotes passages from the works of Percivall, Pott, and Mr. Hey, of Leeds, who take the same view of the subject.

Since the time when those eminent men contributed their writings, the science of medicine generally has been advancing with rapid strides ; and no department of it has been more carefully and elaborately studied, and more beneficially improved, than ophthalmic surgery, which at that period was at a low ebb.

The opinion commonly entertained at the present day amongst ophthalmic surgeons with regard to the question at issue, is, that the capsule of the lens does *not* undergo absorption, and that it is not capable of being removed in that way. Upon this point Messrs. Tyrrell, Lawrence, Mackenzie, and Dr. Farre, at home, with Dieffenbach and Tuengken in Germany, have expressed their positive conviction ; and their names stand so high, that great weight must be attached to their opinions.

Mr. Tyrrell has had the opportunity of examining a vast number of cases in the course of his experience, which has been very great ; and the reasons which have led him to this conclusion



are so cogent, and carry with them so much force, that I am induced to offer them at length; and I may state, that the conclusion at which I myself have arrived, after having examined a considerable number of cases that have passed under my notice at the Royal Ophthalmic Hospital, at Moorfields, entirely coincides with Mr. Tyrrell's.

That writer says, "It is at present a question whether the opaque capsule undergoes solution or not: my own opinion is, that it does not; and I beg to state a few reasons which have led me to this conclusion. I was first induced to reflect upon the subject, and to make inquiries respecting it, in consequence of seeing the eyes of a girl upon whom Mr. Saunders had operated for congenital cataract. The cataracts were in a great measure capsular, and Mr. Saunders had effected an aperture in the opaque mass in each eye, by cutting out small fragments of the capsule with a fine cutting needle. Many of these fragments fell into the anterior chamber; and at the present time, upwards of twenty years subsequent to the operation, they still remain. Now these fragments were originally placed, and have continued in the position considered by all surgeons the most favourable for solution, but they have not become dissolved.

"Again: if the opaque capsule were acted upon by the aqueous humour, it must in the course of time disappear; whereas, I have known very many instances, beside that mentioned, in which portions of this membrane, although submitted to the influence of the aqueous humour, have for years remained the same. Further: if the aqueous humour can act upon the opaque capsule, why do we not occasionally find such form of cataract to disappear without an operation? We never do so. The circumstance which has given rise to the opinion that the capsule, when opaque, becomes dissolved, I believe to be the gradual diminution of the substance after the use of the needle. This is, however, nothing more than a contraction."

Mr. Tyrrell also alludes to the fact, of portions of opaque capsule, when stretched across the pupil, remaining for years unaltered. They may be divided—they shrink and diminish, it is true; but how does this change take place? They gain in density what they lose in length; whereas, did the diminution arise from absorption, we might naturally expect to find that they decreased in substance as well as in bulk. In my opinion, these facts go far to lead us to the conviction, that the capsule is not absorbable, but, as an interesting point, it is well deserving of further observation.

Another point alluded to by Mr. Cruikshank is the probable formation of cataracts without inflammation. Traumatic cataracts

certainly are formed without depending upon this process, though they would naturally be accompanied by it. Where a laceration of the lenticular capsule has taken place from injury, we usually find that opacity of the lens ensues with rapidity, which is to be attributed to the action of the aqueous fluid, and that body generally becomes absorbed in the progress of time through the same agency.

In conclusion, I may observe that there are many points in veterinary surgery which may be advantageously elucidated by reference to human pathology, and *vice versâ*; and therefore it behoves the professor of each to render his best assistance to the other, and thus lay the foundation of mutual advantage and instruction.

Professor Owen has looked over these cursory observations, and perfectly agrees with them.

I remain, Sir, &c.

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## A CASE OF HEPATITIS IN A HORSE.

By JOHN TOMBS, *Esq., V.S., Pershore.*

*May 4th, 1841.*—I WAS requested to attend a grey carriage horse, seven years old, the property of H. E. Strickland, Esq., Cracomb House. He had been bled and slightly purged yesterday. I found him in an exceedingly lethargic state, hanging his head down under the manger, and resting his left shoulder by pointing the foot forward. The extremities and ears were cold. The pulse 95, and peculiarly oppressed. The tunics of the eye and buccal membrane tinged with yellow.

These symptoms convinced me that the liver was affected and engorged with blood. The cause was doubtful, although I was disposed to think that plethora was the principal one, as he had been confined in a loose box three or four months to get fat for sale.

I abstracted five quarts of blood with difficulty, it being extremely thick and venous. When coagulated there was no serum or crassamentum. I gave hyd. submur. and aloes; administered injections, and had the extremities bandaged.

*5th.*—The symptoms the same as yesterday—no appetite—he drinks a little gruel—the character of the pulse remaining unaltered. I bled to the amount of two quarts, which temporarily strengthened it. I inserted a seton, and stimulated the region of

the liver : I also gave aloes, hyd. sub. and enemas. A little buffy coat was on the blood when it was coagulated.

6th.—Intestines slightly acted upon—pulse 90, and still oppressed—membranes of the eyes, nostrils, and mouth very yellow. He does not lie down—stands with his head depressed as before—great reluctance to move. I bled again until I increased the frequency and strength of the pulse: there was more serum and coagulable lymph on the blood.

7th.—No visible improvement. Pulse 92. He refuses all food, but drinks a little. He reels about as he walks. Having pushed venesection to the utmost extent without that decided advantage which I anticipated, I had the region of the liver blistered extensively. The liver must be obstinately torpid, the animal having no motion since yesterday. Continue the medicines and enemas, &c.

8th.—Great tension of the abdomen—tunics of the eyes, membranes of the nose and mouth, not so yellow—pulse 85—eats a little—staggers as he walks—no evacuation. Persevere with hyd. submur. and enemas.

9th.—Pulse 80. He has had several liquid evacuations since yesterday, which have removed the tension of the abdomen, and, to a certain extent, my fears respecting effusion of serum into the cavity of the abdomen. Administer vegetable tonics. Give plenty of gruel. Extremities rubbed and bandaged.

10th.—Trivial improvement. Pulse 76, and not so feeble—bowels relaxed—great debility—pituitary membranes and buccal very pale—rolls about very much when made to walk. Supplied with gruel liberally. Give tonics as before.

11th.—Pulse 72, and stronger. The membranes before alluded to a little more injected with red blood—a large œdematous swelling under the abdomen from the effects of the blister and seton. Give vegetable tonics and mild diuretics.

12th.—The pulse lower, and the appetite improved. I had him led out in the stable yard, when a peculiar symptom manifested itself, viz., spasmodic contractions of the muscles of the left shoulder, ribs, and off thigh. When taken into the stable again these symptoms ceased instantaneously, and did not return at any subsequent period. Give vegetable tonics and nutritious food.

15th.—Gradually improving in appetite, strength, and spirits. When the coachman approaches the door he begins neighing. He lies down. Pulse 50, and stronger.

16th.—Moves about more—he has lost the staggering gait—the œdematous swelling has nearly disappeared. Remove the seton, and walk him about gently two or three times a-day.



17th.—In a satisfactory state of convalescence. Pulse 48, and beats naturally—appetite good—excretions and secretions of intestines regular, which shew that the liver again performs its proper functions. Gentle exercise and vegetable tonics prescribed.

20th.—Apparently well, with the exception of slight debility. Turned out in a paddock in the day, and stabled at night.

26th.—Perfectly recovered, and turned out entirely.

*Observations.*—In reference to the strangely spasmodic affection of the muscles of the shoulder, ribs, and thigh, I believe it to be connected with the liver, in consequence of the great organic nerve being implicated in the disease, and the motor nerves affected sympathizing with it. This is the second liver case that I have treated where those spasms were evident.

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## A CASE OF VOMITING IN A COW.

*By* GEORGE STOWELL, *Esq., Crobeg, County Cork.*

As there are but few cases of vomiting in the cow mentioned in your valuable book on "Cattle," I send you the following case, which perhaps you may consider worth recording in THE VETERINARIAN.

On Friday last a heifer of mine, seven months old, was attacked with the usual symptoms of being hoven. I gave her at once a wine-glass full of spirit of turpentine, which she instantly vomited up. I then had the probang passed into the rumen, but it gave her no relief; and, the swelling of the stomach increasing rapidly, I punctured her side. I let her remain quiet for some time, and expected that all would be well; but the gas continued so long to escape from the side, that I ordered half a pound of Epsom salts to be given, which she also vomited. This dose was repeated, but again returned. I therefore had injections of thin gruel thrown up regularly for five days, during which time she never kept any thing on the stomach; and I have seen her often drink a little water and then vomit it at once, which seemed to cause considerable pain.

She now appears almost recovered, and feeds as before. I have little doubt that the whole was caused by the Epidemic, which has been among my cattle as well as that of my neighbours, and done considerable mischief.

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*To the Editor of "The Veterinarian."*

Sir,—Probably the following case may possess sufficient interest to obtain a place in your periodical. Aware that correct views in pathology or practice can only be obtained by the accumulation of facts (although not engaged in veterinary practice), I cannot refrain from offering this small contribution to the sister science.

I am, Sir,

Your obedient servant,

JOHN JOCE, M.R.C.S.

Swynbridge, Devon, June 9, 1841.

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DISORGANIZATION OR GRANULAR DEGENERATION  
OF THE KIDNEYS IN A SHEEP.

A FIVE-YEAR old ewe, the property of a gentleman (to whom I am indebted for the following account of symptoms), in good condition, with a fine lamb about five weeks old, having been kept during the winter on turnips and hay, was first observed on Wednesday, April 14, 1841, to be following and leaping on the backs of the other sheep. She ate turnips as usual.

*Thursday, 15th.*—Removed, with her lamb, from the flock. Constantly leaping on the lamb—appetite has failed.

*Saturday, 17th.*—Broke from the field, and entered a shed where there were other sheep—she constantly pursued them, jumping incessantly on their backs, and assumed the manner of a ram under much sexual excitement.

*Sunday, 18th.*—Attacked the shepherd, ran at him, and knocked him down. In the afternoon was seen playing with a pole, scraping it with her feet, and striking at it with her head—thrusting her nose frequently into the ground. She ran fiercely towards a person who approached her. It was found necessary to secure her, in order to restrain her violence. Respiration much accelerated—slight tetanic symptoms about the mouth, face, and eyes, and frequently gnawed the mortar of the wall and the wood-work within her reach.

*Monday, 19th.*—She was bled to faintness. After bleeding she manifested the same disposition to attack;  $\zeta$ ij sulphatis magnesiae were given to her. About half an hour after the bleeding, the lamb sucked, and was immediately taken ill, rearing and jumping about. Some white froth escaped from its mouth. The lamb remained dull and heavy for some time—was removed from the

ewe, and on the following morning appeared quite well. The ewe eats little or no nourishment, and is fast losing condition.

*Tuesday, 20th.*—Very restless and violent. Again bled, and  $\frac{3}{4}$ ij mag. sulph. were administered, after which she appeared more quiet. She has been observed to make water during her illness, but no fæces have been passed.

*Wednesday, 21st.*—The medicine has operated several times : she is occasionally violent ; but for the most part remains in one corner of the house, apparently watching every thing that is moving near her. The tetanic symptoms have increased, and there is a frequent lateral motion of the head. She died in the course of the night.

At the request of the owner, I consented to conduct a post-mortem examination, and the following appearances were visible. There was effusion of bloody serum into the cavity of the chest on both sides—the pericardium contained an ounce or more of the same liquid—the left lung, pleura, and pericardium were considerably inflamed—the heart natural—the abdomen contained nearly a quart of coloured serum—the liver was soft, or, as it is generally termed, rotten ; it appeared pale, was clay-coloured externally, and could be lacerated with very slight pressure : neither flukes nor their remains were visible. The spleen was reduced to a mere pulp, and strongly resembled black currant jelly, both in consistence and colour ; the bladder was quite empty, and contracted into firm rugæ ; the stomach was filled with undigested substances, consisting of sticks, stones, and, apparently, fæces ; but looked healthy, as also the intestines. The kidneys were found totally destitute of their investing membranes, and, on an attempt being made to detach them from their connexions, they were lacerated with the slightest force, were much enlarged, and of a whitish yellow colour externally. The cortical part of the kidneys and the fibrous structure had completely disappeared. On making a section into the pelvis of the left kidney, it was found completely filled by an enlarged renal vein, which contained an immense collection of small grains of a pearly white hue, which must have completely obstructed the return of blood. The tubuli uriniferi and bloodvessels were much enlarged, and were beautifully seen, when placed in water, with the aid of a common magnifier. The papillæ appeared to have been consolidated, were smooth and shining, and somewhat resembling cartilage that had been softened by boiling. I could not perceive any granular deposit, either on the exterior of the kidneys or in the situation of the tubuli. The brain was perfectly healthy-looking throughout its entire structure ; but a small quantity of liquid floated on its surface, underneath the dura mater : the ventricles did not contain any liquid, and the membranes were normal.



*Remarks.*—From the absence of any diseased appearance in the brain, with the exception of a slight effusion, it is evident that the cerebral symptoms must have resulted from an imperfect elimination of urea or the other elements of urine, owing to the diseased state of the kidneys. In all probability the mammary glands performed a vicarious function for several weeks, thus prolonging the life of the animal: the fact was rendered evident by the effect of the milk on the lamb two days before her death. Whether the diseased state of the liver and spleen was primary or secondary is obscure.

It is to be hoped that veterinary practitioners will direct their attention to renal diseases in animals. It is a branch of pathology that has long been most undeservingly neglected. Its investigation will, doubtless, enable us hereafter to understand more correctly the true nature of those anomalous cerebral affections which, in the present day, are too often inexplicable, and which serve to obstruct the path of science with doubt, difficulty, and danger. The excellent work of Dr. Christison should be perused by every veterinary practitioner.

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#### THE ACCIDENTAL INTRODUCTION OF AIR INTO THE LEFT JUGULAR, IMMEDIATELY AFTER BLEEDING PRACTISED ON THAT VEIN—DEATH SEVEN HOURS AFTER THE OPERATION.

[Communicated by Professor BOULEY, of Alfort, to the Royal Academy of Medicine.]

IN the sitting of January the 29th, 1839, I had the honour to relate a fatal accident that occurred to a mare placed under my care, and that died immediately after bleeding, in consequence of the introduction of air into the vein. To-day it is my misfortune to present to you another fact of the same kind, and, if not identical with, yet analogous to the former, and which, I believe, may throw some light on the etiology of these serious accidents, which compromise at the same time the life of the patient and the reputation of his medical attendant.

A grey mare, thick-winded, between fourteen and fifteen years old, was brought to my infirmary on the 24th of March, 1840, at eight o'clock in the morning. On the 22d of March she had been in harness about three hours, when, exhibiting symptoms of illness, she was taken home. She refused all nourishment, and

in the course of the night was most restless and violent, as if she was labouring under violent colic.

During the 23d she was quiet, except that several times she seemed to breathe with great difficulty, and panted violently for some minutes.

The night between the 23d and 24th was passed in tolerable quietude; but the most absolute loathing of food continued from the moment of her first attack.

Having heard this account of her, I proceeded to a careful examination of her. She seemed to be very much dispirited, but she was quiet, except that her respiration had the peculiar character of broken wind: the number of respirations, however, was but little greater than in a state of health. Her belly was considerably distended, and evidently gave her pain even to touch it. Her tail had a quivering motion—the mucous membranes were injected—and the pulse was small, hard, and slightly accelerated. My impression certainly was, that her disease, whatever it might be, was situated in the abdominal cavity, and that it consisted of congestion, or inflammation that had not been properly attended to in its early stage. Although the pulse was but little developed, and there was no decisive symptom of inflammation, I thought that a slight bleeding should be effected: I accordingly opened the left jugular vein, and confided to an intelligent pupil the task of obtaining about four and a half pounds of blood, while I cleaned my lancet, and looked at another patient.

Two minutes had scarcely elapsed when he came to me and said that the mare appeared to be worse, and that the blood scarcely flowed from the vein. I ran to her, and found, to my great surprise, that the blood contained a considerable quantity of spume, and that the little that continued to flow was mixed with a great many air-bubbles. I observed at the same time she was staggering—that her respiration was laborious—that her nostrils were dilated—her eyes fixed—the mucous membrane pale—the tongue hanging out—the pulse not to be felt—in a word, that death was near at hand.

It was impossible for me to misunderstand the serious state of the affair, and you will easily comprehend how much it surprised and grieved me. Although I had nothing wherewith to reproach myself—although I had bled in my usual way, and to the extent which the state of the patient seemed to require, yet I felt all the responsibility which such a termination of the affair would bring upon me. A crowd of conjectures presented themselves to my mind. I endeavoured, but in vain, to arrive at some satisfactory explanation of the occurrence. I thought that there must be some fatality about me, that two such events should occur to me in so

short a period of time. Desperate, however, as the case seemed to be, I did not abandon my patient. I dismissed all those who stood about, with the exception of one assistant. Persuaded that the loss of blood is always more or less favourable in such circumstances, I endeavoured to cause it to flow, although it was almost composed of spume alone. The abstraction of this little quantity of blood produced, as might be expected, no effect, and she fell at once, as if struck with lightning, at my feet.

She lay at least ten minutes almost without motion, and I thought her dead : but she then began to struggle a little, and after several efforts raised herself. There she stood staggering and ready to fall again ; but her pulse was a little more developed, her respiration less difficult, and the membranes of a more healthy colour. Dry frictions were applied over the spinal region, and extending to all four extremities : these means seemed to produce a marked amelioration, but it was of short duration. At the expiration of half an hour she fell anew on the litter, and, after some useless efforts to raise herself, died.

The pleural and pericardiac cavities contained a small quantity of coloured fluid. The lungs were emphysematous ; but this lesion appeared to be of long standing, and coeval with the cough. The heart was larger than natural. The right cavities contained a great quantity of black blood, in which were scattered many globules of air. The walls of these cavities, the fleshy columns, and the valves, were lined with transparent globules. The pulmonary artery, examined near its last ramifications, presented a spumy liquid. The left auricle and ventricle contained a little blood. There were the same appearances as in the right cavities, but the globules were not so numerous.

The abdominal cavity contained from eight to ten pints of fluid of nearly the colour of blood. Many points of the peritoneum were covered with false membranes of recent formation. There were traces of considerable congestion through the whole extent of the colon, especially along its bands, until we arrive at the floating portion. A great quantity of blood, amounting to twelve or fourteen pounds, was effused in the membranes of that intestine, and gave them considerable thickness. The mucous membranes that lined the cæcum and colon were thickened, and the contents of these two intestines were mixed with a great quantity of bloody fluid.

The blood contained in the posterior vena cava was mingled with globules of air. A greater quantity was remarked in the mesenteric veins, where they seemed to be separated by columns of blood. The trunk of the vena porta and its divisions in the liver enclosed a bloody spume. The veins which ramified over



the surface of the brain contained a great number of globules, which by a little pressure could be made to pass along the vein that contained them. The same phenomenon was observed in the veins of the cerebellum. Some small globules were also seen in the vessels of the plexus choroides.

It appears then that, beside the lesions that ordinarily determine the introduction of air into the veins, there existed in this animal evident traces of intestinal apoplexy, complicated with peritonitis.

This last affection—intestinal apoplexy—which the horsemen of former days designated by the name of *red colic*, is frequent in the horse, and always mortal when it is carried to the degree and extent in which it was here found, that is to say, when a great quantity of blood exists between the parietes of the intestines. Every thing induces us to believe that in this case the flow of blood into the intestines occurred a little while after the appearance of the first symptoms. The violent colic under which the animal appeared to labour renders this probable. It is, however, impossible for me to say any thing precise or conclusive in this case, but I cannot help believing that this affection existed at the time when the animal was first brought to me. The lesions found on opening the abdomen leave no doubt about this.

But let us see what it was that actually destroyed the horse, and what were the circumstances that occasioned or favoured the entrance of air into the jugular vein.

Although the presence of air in the circulatory current had determined these instantaneous and fearful phenomena in the mare—although this fluid had been found not only in the cavities of the heart and the greater part of the veins, the animal having lived seven hours after the accident—the intestinal apoplexy appears to me to have been the actual cause of death. As to the accidental introduction of air into the jugular vein, it can be easily imagined that it is favoured, and even strongly determined by the state of almost emptiness in which the vessels were found, in consequence of the intestinal hæmorrhage at the very time that I effected the bleeding.

Although this explanation of the matter appears to me to be a very rational one, I would, in order to render it more satisfactory, appeal to an honourable member of this Academy, who is now present, and to whom science is indebted for a valuable work on the introduction of blood into the veins, and who has laid it down as a principle that, “in surgical operations, the introduction of air into the veins is to be feared, in proportion as the patient has been weakened by loss of blood.”

The honourable members of the Academy now entered into a discussion on the subject of the introduction of air into the veins.

*M. Amusat* regarded this fact as a very important one, since it may be ranked among the small number of incontestible facts which science possesses. It is confirmative of the multiplied experiments that have been made on this physiological and surgical question. Here the existence of the animal had been prolonged, because the operator had taken care to close the opening of the wound, and the introduction of air had been favoured by the weak state into which the animal had been brought by the intestinal hæmorrhage that had taken place.

*M. Barthélemy* expressed his surprise at not having met, in the course of a practice of forty years, with a single fact analogous to those which had come under the observation of *M. Bouley* in so short a space of time. He looked back on the experiments which he had made on this subject, and the results which he had deduced from them, proving that the introduction of air into the veins is possible, but that it requires an assemblage of special conditions that rarely presented themselves. In the case before them the animal had been attacked by intestinal apoplexy; but we know that this malady, too common, ran its course with wonderful rapidity, and produced death in from ten to twelve hours. In every case that had come under his notice it was not possible to introduce sufficient air to destroy the animal in the space of two minutes.

*M. Renault* had not, in the space of fifteen years, witnessed more than one case similar to those recorded by *M. Bouley*. In the experiments which he had made in concert with *M. Lassaigne*, he had attempted to introduce air into the veins; and two pints of air introduced by means of a bladder produced very different effects on different horses, yet in none of them were followed by death; but three pints of air introduced in the same way, in almost every case destroyed the horse.

*M. Ferrus* thought that the danger of bleeding from the jugular was very much exaggerated. For his own part, in his practice in the hospital of the Bicêtre, he had effected a great number of bleedings from the jugular in the human subject, and no accident had occurred. He had, however, seen two horses that died from the opening of this vessel. He sometimes thought that the position in which the horse was placed after the operation, his being tied so short and his head elevated, would sometimes contribute to produce this fatal termination.

*M. Rochoux* did not think that, in the case cited by *M. Bouley*, it was necessary to recur to the introduction of air into the

vein in order to account for the death of the animal. The internal hæmorrhage was fully sufficient to explain it; for we know that, under the influence of a state of hæmorrhage, the blood undergoes considerable alteration. Various gases are developed and circulate with it, and death will ensue from the slightest cause.

*M. Amussat* could not admit that the introduction of air into the veins, in the practice of veterinary medicine, was so rare as many persons had asserted. The number would be far more considerable, if the cases in which this misfortune had occurred were frankly avowed. The practice of *M. Bouley* was a sufficient proof of this. Enlightened by experience, surgeons no longer operate in the neighbourhood of the neck, without taking every possible precaution. There was not time at present to take into consideration, for the benefit of the veterinary surgeon, the provisions and the mode of operation which would prevent the danger arising from an accident always serious, both in its nature and its consequences: but he would say that, in the case related by *M. Bouley*, the death of the animal was solely to be attributed to the presence of the air, the introduction of which was favoured by the intestinal hæmorrhage.

*M. Bouillard* thought that the case related by *M. Bouley* did not contain in it any thing unusual.

*M. Bouley* reminded the meeting of that portion of the case in which it was stated that this accumulation of blood in the intestines existed at the time when the bleeding from the jugular was effected, and that the animal was destroyed by the progress of the intestinal hæmorrhage. He did not, however, deny that the introduction of the air hastened the moment of death.

Having observed, during a practice of two-and-thirty years, but two similar cases, he thought with *MM. Renault* and *Barthelemy*, that this was an accident of exceedingly rare occurrence. He thought also with them, that the introduction of air into the veins was always more serious when the animal was previously ill, but he did not think that a state of disease was necessary in order to cause the accident to be mortal. He believed, on the contrary, that, in perfectly sound animals, as in man, the accidental introduction of a certain quantity of air would be attended by the most fatal consequences.

The opening of the dead body, which alone could give sanction to the facts stated by *M. Ferrus*, not having been made, *M. Bouley* thought that he had a right to reject them. The elevated position in which the head of the horse was usually put immediately after bleeding, could not be attended by the serious consequences described by *M. Ferrus*, since the orifice has been closed



previous to the head being thus tied, and the introduction of air rendered impossible.

Finally, M. Bouley, while he thought that his case could only be considered as one of the series which M. Amussat had so clearly illustrated, could not admit with M. Bouillard that it presented nothing *particular*. A pathological fact which verifies the truth of a surgical principle, hitherto demonstrated by experiment alone, seems by this very circumstance to offer something that is *particular*. This fact is otherwise an important one, for according to it, of all those that have been cited in veterinary medicine, in this alone the air entered the vein at the moment that the opening was effected; while in the other cases that are reported, this fluid does not enter the vein until the compression of the vein and the consequent issue of blood have ceased. It was regarding it in this double point of view that M. Bouley thought it a case of some interest. He hoped and believed that he was not deceived, and that the Academy would not repent of the time that was devoted to it.

*Réc., Janvier 1841.*

## A BRIEF REPORT OF THE CLINICAL PROCEEDINGS IN THE ROYAL VETERINARY SCHOOL AT BERLIN, 1839.

*By M. HERTWIG.*

IN the course of this year the total number of animals received into the hospital and subjected to medical treatment was 3022; namely, 2424 horses, 6 cattle, 12 goats, 3 sheep, 1 deer, 2 pigs, 555 dogs, 4 cats, 4 hens, and 11 other birds.

57 horses and 8 dogs, which had been admitted into the hospital during the previous year, remained under treatment.

Besides the abovementioned animals received into the hospital there were 3600 horses, 12 cows, 20 goats, 24 pigs, about 800 dogs, and various small animals, as apes, squirrels, fowls, parrots, canaries, &c.; some of which were brought once and others several times to the school for advice or treatment.

Among the animals visited out of the school and subjected to medical treatment by Dr. Spinola, were 431 horses, 31 head of cattle suffering under infectious diseases, 5899 head of sheep, 8 goats, and 25 pigs.

The greatest number of sick horses came, as is usually the case, about the middle of the year, and at the beginning and the end there were not so many; thus, in January there were 194,

including the 57 remaining from the preceding year ; in February 178, in March 189, in April 182, in May 202, in June 266, in July 314, in August 226, in September 185, in October 186, in November 181, and in December 121.

The number of sick dogs in each month was in about the same proportion.

The objects for which these animals were brought to us were, in general, either [A] to be cured of some actual complaint, [B] to be examined with regard to the existence of some unsoundness or suspected lurking disease, or [C] for the purpose of having some operation performed.

In class A there were 1989 horses, 5 cows, 12 goats, 3 sheep, 1 deer, 2 pigs, 511 dogs, 4 cats, 4 fowls and 11 other birds, brought to the institution.

In class B, 322 horses, 1 cow, and 49 dogs. The latter were chiefly brought to be examined with regard to their being rabid, because persons had been bitten by them.

In class C, 113 horses were taken into the hospital and kept at the expense of the School.

Of the animals appertaining to the first class, 973 horses, 13 cattle, 2 pigs, 347 dogs, 2 cats, 4 fowls, and 8 small birds, were suffering from internal diseases ; and 1016 horses, 6 cattle, 164 dogs, 2 cats, and 3 birds, from external ones. Out of these there were either cured, or restored to a better state of health, 1822 horses, 4 cows, 9 goats, 2 sheep, 2 pigs, 424 dogs, 3 cats, 3 fowls, and 7 birds. 107 horses, 1 cow, 2 goats, 1 deer, and 111 dogs, died ; while 10 horses, 1 goat, 1 sheep, 15 dogs, and 1 cat, were destroyed as incurable or useless. One horse died of fracture of the fetlock joint producing fever ; 1 of fracture of three ribs, the broken parts of which, injuring the lungs, produced inflammation and suppuration there ; 1 from fracture of the basis of the skull, accompanied by extravasation of blood ; 1 of quinsy, with violent inflammation of the mucous membrane of the bronchi, in consequence of a drink being poured into that tube ; 3 of inflammation of the diaphragm, followed by copious exudation ; 22 of inflammation of the intestines going on to mortification and gangrene (87 were attacked by this disease) ; 12 of colic leading to rupture of the bowels or stomach (160 were attacked with this disease) ; 1 of mortification or gangrene ; 4 of putrid fever (6 were attacked) ; 1 of intense inflammation of the hoof going on to mortification ; 16 of influenza (epizootic inflammation of the lungs, liver, and diaphragm, 179 being brought to us suffering from this complaint) ; 2 of staggers (out of 39), 19 of inflammation of the lungs (out of 157), 5 of suppuration and tuberculation of the lungs (out of 9), 1 of inflammation of the kidneys, 2 of

acute rheumatism, 10 of tetanus (out of 12), 1 of injury of the withers, 1 of a large wound in the throat, which tore the wind-pipe, the œsophagus, and the larger vessels and nerves of the right side of the throat.

Among the cattle 1 cow died of phthisis, 1 goat of gastro-enteritic fever, 1 of lameness, and a deer of lameness in the withers.

The chief part of the dogs that were lost died of distemper; the remainder of inflammation of the stomach, intestines, or lungs, or dropsy, gastro-enteritic fever, diarrhœa, consumption, lameness, or apoplexy.

Among the animals brought to the College for examination, 138 horses and 49 dogs were perfectly sound; 82 horses and 1 cow were suffering from various complaints which were, however, only of a trifling nature; 51 horses had the staggers; 16 were suffering from difficult breathing; 8 from chronic inflammation of the eyes; 4 from gutta serena; 19 from glanders and worms, and 2 from acute fever. The 113 horses spoken of in class C were only used for the purpose of practice, and then destroyed.

In this year (1840), 55 horses and 10 dogs have been brought to the institution for medical treatment, and 2 horses for examination.

The prevailing character of the diseases in 1839 was alike in every month. The animals (especially horses) were first attacked with a catarrhal or rheumatic complaint, which in process of time took on a gastro-enteritic character, or else became complicated with gastro-enteritis. The characters of pure inflammation were rarely seen, or, if they were, they usually existed but a very short time, and assumed a typhoid character. The contagious diseases were the influenza and mallenders in horses; pulmonary consumption, dysentery, and, now and then, foot-rot, and inflammation of the mouth, in cattle; sheep-pock, inflammation and worms in the intestinal canal, putrid fever, bad foot-rot and lameness in sheep and lambs; gangrene in pigs; distemper in dogs, but not a single dog laboured under rabies. A very fatal, and for the most part unknown, disease shewed itself among birds in March and April.

The most prevalent of all these diseases were the influenza among horses and the sheep-pock in sheep. The latter had shewed itself occasionally during the first and second quarter of the year; but towards the end of the third quarter and during the whole of the fourth it spread rapidly in every direction, and was particularly prevalent towards the north-east and south-west, where it not unfrequently assumed a very serious and fatal cha-



racter. The influenza appeared during the whole year, and especially from the beginning of September to the end of December. It usually assumed the appearance of inflammation of the lungs or liver, or, now and then, that of inflammation of the diaphragm, and was almost always combined with symptoms of gastro-enteritis. The weakness induced by this disease was so great, that, in a few hours after the attack, the animal could not walk without staggering. This rendered it evident that the plentiful letting of blood, which in so many cases is generally beneficial, must not be practised here. Recourse was therefore had, in most cases, first to calomel, emetic tartar, Glauber's salts, and sometimes digitalis; and, subsequently, to camomile flowers, valerian, sweet flag, camphor, turpentine and juniper-berries, and these were accompanied by external applications, as issues or setons, blisters, or mustard applications. By means of this mode of treatment, 163 out of 179 patients were cured and returned to their owners.

*Magazin für die gesammte Thierheilkunde, 1840, part iv, p. 511.*

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## ON THE POWER OF NATURE IN PRODUCING THE REUNION OF FRACTURED BONES.

*By Mr. J. HORSBURGH, V.S., Dalkeith, N.B.*

IN looking over THE VETERINARIAN of the last year, I find that I am your debtor for the concluding part of a letter on the reunion of fractured bones. How that debt has continued so long unpaid I can in no way account. To make the best amends in my power, I beg to add a few cases, and will begin with a case at home.

A promising filly, by *Corinthian*, was bred by Mr. J. Hogg, of Borthwick. When little more than a year old, she was removed from a park in which she had been grazing to another of finer pasture, in which were several other horses. On the next morning she was found in a ditch, and, when taken home, could not put the near foot to the ground. I was desired to examine her, and found an oblique fracture of the large pastern bone.

The owner being anxious to save her, I had her brought home, which was a very little distance, and ordered the parts to be enveloped in a large poultice, and warm water to be constantly employed in order to prevent inflammation. I intended to have continued this for three or four days, previously to applying a bandage; but, after removing the poultice for this purpose, I found the part very much swollen, the foot quite straight,

and the animal taking particular care that it never touched the ground. After some consideration, I determined to leave it to nature to effect a cure, only recommending the use of fomentations.

She was kept confined for about two months, when she was allowed to run about the place, which she could do very well on her three sound legs. At the end of six months the leg had got fine, but there was considerable thickening of the pastern, similar to ringbone, to remove which she was fired.

The owner kept her nine months, when he began to despair of her ever getting sound. I bought her for £5, for I was very anxious to see the result of the case. She got quite sound in about twelve months after the accident. At three years old I rode her, and continued to do so for seven years, although my journeys are none of the shortest, nor do I often ride at a jog-trot. At the expiration of that period she died of diseased lungs, but, during the whole of the intermediate period, she was never in the slightest degree lame.

I will now give you a case or two of cattle.

1st, A cow belonging to Mr. Peake, of Craigend, was breaking a fence, when a stone was thrown at her which struck her above the hock, fracturing the tibia. As she was a valuable animal I was sent for to bandage and dress her, which I did, to the best of my power, with splints, tow, tar, &c., and we made what we considered *a good job*. Wishing to get her on her feet, we attempted to lift her up, when she became so furious at the restraint under which she had been placed, that she fairly knocked her horns off. All our labour had been in vain—the bandages were of no use, and the leg was dangling and flying about in every direction. We were compelled to cut the rope that fastened her to the stake, lest she should strangle herself; and the owner, in despair, ordered the butcher to be sent for in order to destroy her.

I gradually slit off the bandages whenever I could get near her, and then went to the house to intercede for her life. On my return, after a short absence, she had got up, and had walked to a shed of her own accord. There she was shut up and left to her fate.

Partial union between the divided bone took place in about six weeks, but there remained a wound on the inside of the thigh, from which several pieces of bone were, at different times, removed. Ultimately the wound closed, and she was fattened for the butcher in the following winter.

2d, About twelve months ago, being at Mr. Cassar's, Herriott Town, attending a horse, I saw a two-year-old ox, with fracture of the tibia, standing in the open court; and in the summer fol-

lowing there was a cow in the same state, and without bandage of any kind, grazing in a soft damp meadow. Both of them did well. The cow lay out night and day, but was kept away from all other cattle.

I think it needless to add more. We know that in the bones of the horse where bound by muscles, union generally takes place unassisted by bandages, the muscles acting as a bandage; and in the ox, even when fracture takes place at a part where there is little or no muscle, Nature has supplied a bandage in the form of adventitious matter, which becomes organized, thickening the parts to three or four times their natural size, and which matter becomes again absorbed as soon as the fractured bone is perfectly consolidated.

## THE DISEASES OF PIGS.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

### INFLAMMATION OF THE BRAIN.

19th Jan. 1839.—This day Mr. Corser, of Whitchurch, found two fowls in the pig-sty dead, and another missing, and also the pig ill, and he suspected that they had all been poisoned.

The two first I opened. One had been injured about the head and neck, and the feathers pulled off; the other was injured about the head, and there was effusion of blood on the brain.

*Symptoms in the Pig.*—The night previous had been a very cold and wet one, and he was to all appearance wet, cold, and starved. He was found in the morning almost helpless, nearly blind, and wandering about unconsciously, running against the walls or any thing else. The breathing was natural; the pulse rapid and small, and not easily distinguished at the chest. He did not seem in any pain. He was bled from the tail and ears, and I also punctured the roof of his mouth; but we got little blood from him. I gave him  $\text{ʒij}$  ol. ricini, and blistered his neck.

20th.—About the same. I gave  $\text{ʒij}$  more of ol. ricini. At night I gave  $\text{ʒi}$  pulv. jalap, and administered a clyster.

21st.—A little better; bowels but little open.

22d.—Worse; has fits now and then, and screams and roars, and is in a good deal of pain. I gave him some goose oil.

23d.—He died this morning.

*Examination.*—We found a part of the fowl that was missing in his stomach, but there were none of her bones. The stomach



and every organ was sound except the brain. The meninges of the brain were completely gorged with blood, and in some places there was extravasation of blood slightly penetrating into its substance. The other part of the brain was not inflamed, nor was there any effusion of serum in its ventricles.

*Cause of death.*—This pig was about five score weight, and feeding fast. He had, a few days before, a quantity of grains given to him, which had most probably brought on the disease in the brain, and had disordered his intellect. Perhaps it had rendered him somewhat insantly ravenous, and caused him to destroy the fowls. There is a saying that, “rum while in hogs-heads is capable of doing but little mischief, but when it gets into men’s heads—look out!” but I fancy that if any considerable quantity of the unfermented liquor was contained in the grains after brewing, it would produce an injurious effect.

#### RUPTURED SPLEEN.

Nov. 1840.—I examined a pig belonging to Mr. Roberts, that had died after having been ill but a day or so, and without shewing any well-marked symptoms of disease. I found from three to four quarts of bloody serum in the abdomen, and the spleen was from three to four times its natural size, and completely congested. In one place there was a small rupture, around which was a quantity of coagulated blood. All other parts were sound.

#### DISEASED LUNGS—PHTHISIS ?

In the months of Nov. and Dec. 1840, several small pigs, belonging to butchers, died. They had been feeding on potatoes and carrion, and on opening them I could discover nothing else amiss than disease in the lungs. The anterior lobes were the parts generally diseased, and these were found to be, on handling them, hard, heavy, and uneven, and had neither the feeling nor appearance of the healthy portions. On cutting into them they appeared to be composed of miliary tubercles in an early stage of suppuration. The disease did not appear to be in the bronchial tubes, but in the cellular or parenchymatous tissue. After a portion had been cut through I thought some specks of pus could be seen. When alive they had symptoms of diseased lungs, and their respiration was greatly accelerated; they were also often coughing.

#### DISEASED HEART.

28th April, 1840.—I examined a dead pig that was half grown. The owner purchased it about ten days ago, but soon after it was brought home she found that it was not a good feeder, and that

it hung its head more heavily than usual, and was not well. She ascertained that it was brought by a person into the market and sold to a pig-jobber, who sold it again to her, knowing it was not well. It was in good condition.

*Examination.*—All the disease I could find was in the heart. The pericardium did not shew any disease, nor did the external parts of the heart; but, on cutting open the left ventricle, the valves were found to be severely diseased. They were from a quarter to half an inch thick, but, of course, varied in different parts, and were in a very ragged uneven state, not, properly speaking, scirrhus, but more of a fibrous nature, yet presenting a state of disorganization not unlike the surface of cancer. This strange substance must have nearly filled the orifice of the ventricle, and one portion was forced a little way up the aorta. It was curious to observe that the disease did not extend any farther than to the extent of the valves, and which would almost lead us to the belief that the valves were not solely a reflection of the lining membrane of the heart. The edges towards the auricle were beautifully defined.

#### ONE KIDNEY.

Mr. Hesketh killed a small fat pig that had only one kidney.

#### SMALL SPLEEN.

*Jan. 1, 1841.*—Mr. Hurleston killed a fine fat pig that weighed about fifteen score, and, on cutting it up, the spleen was found to be a very small one, and nearly absorbed. It was about the usual length, but its width was not above half an inch at any part, and little more than an eighth of an inch thick, and weighed only seven drachms; however, as it was, it was apparently sound. The spleen was brought to me by the butcher, and it was surrounded by a good deal of adeps.

#### A REMARKABLE FACT FOR NATURALISTS.

A sow, belonging to a person at Mitford, recently farrowed four pigs, and in three weeks afterwards seven more. She had evidently gone the usual period of gestation with both litters, as she was sent to two males at an interval of three weeks, and the litters are of distinct breeds, corresponding with the respective sires.—*Shrewsbury Chronicle, April 9, 1841.*

#### MAN AND SWINE.

“I may here take occasion to observe, that there is a remarkable similarity of constitution between man and the swine. Scro-

fula, which word is derived from the Latin name of the sow, 'scrofa,' is peculiar to man and swine. These last are also subject to apoplexy. A friend of mine lost several by this disease. They are also liable to softening of the brain; a disease rare, if at all to be met with, among other brutes, but common in the human subject. They are liable to tubercles in the lungs and liver, to disease of the heart, to rupture of bloodvessels, accidents almost peculiar to them and mankind; and, more remarkable still, they are subject to a species of madness quite different to the hydrophobia in dogs and other brutes, but bearing an exact resemblance to the human insanity. This resemblance between man and swine I notice that Juvenal represents the Jews as being in part aware of:"

"Nec distare putant (that is, the Jews) humana carne suillam."

*Satire 14, line 98.*

*See Farmer's Magazine, No. 1, vol. x, 1839.*

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[We cordially thank Mr. Cartwright for this communication. We consider it much to his credit to have taken up such a subject, and to have treated it so judiciously as he has done. We trust that the time is not far distant, when the veterinary surgeon will consider as his legitimate patient every animal that we have domesticated, from whom we derive certain advantages, and whose sufferings—perhaps the result of the folly or cruelty of man—he can alleviate.—Y.]

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## CASES OF STRANGLES IN THE HORSE; AND PNEUMONIA IN CATTLE.

*By Mr. W. C. LORD, V.S., Mitchelson, County Cork.*

ALTHOUGH but a short time in the veterinary profession, I have met with some interesting cases; and if you would give insertion to one or two of them in your excellent Journal, they might not be uninteresting to some of your readers.

The first is a case of *strangles* in a blood foal, fourteen months old.

*Symptoms.*—A large swelling extended over the submaxillary space, but largest at the gland; attended by dulness, loss of appetite, and slight running from the nose, presenting altogether considerable resemblance to the influenza, except that the pulse



did not indicate much fever, and the swelling was larger than in the latter disease.

*Treatment. 1st May.*—I gave a purgative, and, as the tumour appeared in rather a sluggish state, I applied a blister, having first removed the foal. She was placed in a loose box, and orders were given that she should be fed on bran mash. As the distance was rather great, I was not able to see her again until the

*5th.*—The tumour under the throat was much decreased; but, to my great annoyance, I found a large swelling on the near shoulder, and another on the off hind leg. I ordered them to be bathed with warm water three or four times in the day, and, as I was afraid that fever was coming on, I left the following prescription: antim. tart.  $\mathfrak{z}$ iss, et potassæ nitratis  $\mathfrak{z}$ iv. This to be divided into four powders, of which one was to be given night and morning in a little gruel, or in the animal's mash.

*8th.*—The tumours on the limbs have almost entirely disappeared, but that on the neck is rather increasing. I left directions that poultices should be applied regularly twice every day.

*11th.*—I found the tumour becoming quite callous, and neither increased nor decreased since the 8th; but the animal was looking lively, and eating well. I gave a liniment for the hock, composed of equal parts of liquor ammoniæ, turpentine, and oil, leaving orders that the swelling should be rubbed twice a-day with it.

*15th.*—The tumour has disappeared from the neck, but metastasis of inflammation has taken place, and the disease has attacked one of the eyes. I at first ordered cooling lotions, as Goulard's extract, &c., taking care to keep the bowels open; but finding that this had no effect, and that the eye was assuming the aspect of the chronic stage of ophthalmia membranarum (moon blindness), I gave a lotion composed of nitræs argent.  $\mathfrak{z}$ ij, et aquæ distillatæ  $\mathfrak{z}$ i: one or two drops to be put into the corner of the eye morning and evening.

On the 27th the haze had quite disappeared, and the animal has since been in perfect health.

This is rather an unusual case, as we seldom find the disease attacking so young a horse, and in such a complicated manner. I think Professor Dick advises to give, in those cases, calomel  $\mathfrak{z}$ ss once or twice a-day.

#### PNEUMONIA IN CATTLE

Is a disease which is at present very prevalent and fatal in this part of Ireland, although at a very unusual season for such a complaint.

On my return from the Edinburgh Veterinary College, in the latter end of last April, the Earl of Kingston sent for me, and told me that his cows were dying very fast from some disease that had been in his farms for the last year, and which his steward believed to be incurable. After a minute examination I found the symptoms as follow :—Pulse, in almost all that were affected, from 90 to 120, but very small ; horns, ears, and legs cold ; the animals heaving violently at the flank, and grunting as if in great pain ; also grinding the teeth. With the stethoscope I could discern the bronchial respiration in some, and the mucous râle in others.

*Treatment.*—In the early stage I bled largely, notwithstanding that the pulse was small, as I consider that this arises from pulmonary congestion, which bleeding removes. I next fired and blistered the sides, and gave pulv. veratri alb. ʒss morning and night, as long as they could bear it ; and changing it then for tart. antimon. and nitre, keeping the bowels open by occasional laxatives. With this treatment I cured four out of five of the beasts which the steward and attendants considered as sure to die, and I have more recovering.

A gentleman, also, who lives near to me, and who had lost seventeen cows with it, had tried a great many remedies, but had not saved a patient. He asked me to look at the two last of his stock, and which were very ill with a similar disease ; telling me, at the same time, that I might try any experiment I wished on them, as he knew they would not recover. To his great astonishment, and with the above treatment, I had them well for him in ten days.

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[We have much pleasure in inserting these first Essays of Mr. Lord. We should not, perhaps, have been content with the small doses of tartarized antimony and nitre which this gentleman prescribed for the horse ; and, possibly, we should have preferred digitalis to the hellebore in the treatment of pneumonia in cattle, and especially *if they happened to be at a distance* ; but he succeeded, and with the cattle super-eminently so, and we have no right to object. We shall be happy to hear again from this gentleman. The first essays of the zealous and scientific practitioner will be regarded by us as somewhat sacred property ; and we tell our young friends that it is far better thus early to commence their scientific career, than to adopt that system of secrecy and mystery which so many are now pursuing.—Y.]

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## A CASE OF GLANDERS IN THE HUMAN SUBJECT.

*To the Editor of "The Lancet."*

Sir,—I THINK you will deem the accompanying case of glanders in the human subject deserving of notice in "*The Lancet*." The sufferer was a respectable friend of mine, residing at Peterborough; and the inclosed account is obligingly furnished conjointly by Dr. Skrimshire and Mr. Porter, his medical attendants there. In St. Bartholomew's several fatal cases of the same horrid distemper have occurred within the last year. I have exerted myself, but hitherto ineffectually, to prevent the public sale of glandered horses in Smithfield-market, and the surgeons of the above hospital have unanimously concurred in a note directed to the Court of Common Council of the City of London, of which the following is a copy:—"We, the undersigned medical officers of St. Bartholomew's, having seen several fatal cases of glanders in the human subject, contracted from the horse, are of opinion that the proposition now before your honourable court, for the appointment of a Veterinary Inspector of Smithfield Horse Market, is highly necessary, both as a prevention to the increase of the disease among animals, and with regard to the public health of the metropolis.

(Signed)

J. P. VINCENT  
WM. LAWRENCE  
EDWARD STANLEY  
C. F. SKEY  
THOS. WORMALD."

This document, together with a memorial more strongly expressed, from all the influential inhabitants around Smithfield, was presented by Mr. Bedford, and referred to the "Markets Committee;" but the chairman, a respectable carcass butcher of Newgate-market, did not consider that such interference was necessary, and the fraudulent sale of glandered horses goes on as usual.

It is a singular fact, also, that the name of the unfortunate subject of the present case (who held premises in Giltspur-street) was one amongst those of the memorialists.

Yours, truly,

CHARLES CLARK,

Veterinary Surgeon.

Giltspur Street, Smithfield,  
May 15th, 1841.



CASE.—Mr. Pink, æt. 52, carrier, and proprietor of a London waggon-office, was wounded in the thick part of the thumb of the left hand by a nail, on the 17th of March, 1841. Part of the nail was so buried in the flesh that the surgeon was obliged to cut down upon it for the purpose of removal. The wound progressed satisfactorily, and, on the 30th of March was nearly healed.

On the 3d of April Mr. Pink complained of being unwell, with pains in the limbs, head-ach, and feverish heat. On the second day following he sent for Mr Porter, his ordinary medical attendant, who found him labouring under severe febrile symptoms, with considerable pain in the left wrist, arm, and shoulder, and an inflammatory blush, with slight swelling on the back of the left hand and wrist. Two days following he complained of intense pain over the inferior angle of the scapula; the part appeared swollen, red, and hard to the touch. A similar swelling took place on the outside of the left leg, attended with the like pain, which eventually formed matter, and on being opened on the 16th, gave exit to a thin purulent bloody sanies. The following day his symptoms were worse. He complained of intense pain in the left knee-joint; indeed, it was so exquisitely painful that he could not bear its being touched; pain over the frontal region: left upper eyelid swollen, of a dusky erysipelatous hue: discharge of a thin bloody sanies from both nostrils; dry, brown, furred tongue; low muttering delirium, pulse quick, compressible, and weak, but regular. About the eighth day of the disease several small subcutaneous tumours were observed by the touch only, the integuments covering them not being elevated or discoloured; these were moveable, hard, oblong, and isolated.

The febrile symptoms became more and more severe; and on April the 20th, I was called in consultation. The fever was attended with the usual typhoid symptoms, &c. He complained of pain on being moved, particularly in the left arm and shoulder; the eyelids were inflamed, and partially closed by the dusky tumefaction of the palpebræ; several small tumours were discoverable under the cutis, varying in size from that of a split pea to that of a split kidney-bean; similar tumours were observed on the forehead, but these were tubercular, being elevated above the surrounding skin; considerable discharge of brown sanies from his nostrils. The typhoid symptoms were more severe on the following day; and in addition to the above symptoms were discovered an eruption of pale vesicles, resembling that of vari-cella, over various parts of the body, some containing pellucid lymph, others opaque puriform fluid, and others were desiccated.

These symptoms so much resembling glanders occurring in

the human subject, an inquiry was made, and it was ascertained that the patient had himself been employed for some time past in feeding and administering balls to two glandered horses, and that his wife had observed to him, on the first days of his illness, "that the wound in his thumb was inflamed and festered." There could be no doubt of the nature of the malady. The ordinary treatment for typhus, with the vigorous administration of calomel, which had been commenced as soon as symptoms of subacute inflammation of the cerebral tunics presented themselves, was persevered in. Coma supervened in the course of this day, and death took place early on the morning of the 23d.

Inspection of the body was permitted on the same day. The wounded thumb was swollen and inflamed, as was one of the fingers of the other hand, in which deep-seated fluctuation was evident; but neither inflamed absorbents, nor enlargement of axillary glands could be traced. The vesicular eruption was general over the body, and very many of the subcuticular tumours were discoverable on pressing and pinching up the skin; these, when punctured, were found to contain a sebaceous or curdy purulent matter. On close examination, the vesicles were seen to be surrounded by a perfectly white areola, much paler than the surrounding cutis. On opening the chest, the pleura pulmonalis and pericardium displayed very many spots of bright-red ecchymosis. On the surface of the lungs were many small tumours of a similar character to the subcutaneous ones above described, and the blood flowing from the large veins was observed to be more fluid than usual. For very sufficient reasons the post-mortem examination extended no further.

F. SKRIMSHIRE.

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## THE DEVON AGRICULTURAL SOCIETY.

It is pleasant in the wane of life to tread, in fancy at least, the ground that we paced in our early years—the scene of some of our happiest moments, and if, although we are passing away, we have the full assurance of the gradual improvement which is there taking place, we may be forgiven if we linger a little in the contemplation of it.

The fourteenth meeting of the Devonshire Agricultural Society took place in the Castle Yard, Exeter, on the 1st of last month, and although illness, and avocations from which he could not

escape prevented the Editor of this Journal from being there, he was often present in imagination.

The exhibition of sheep was large, and more than usually fine. From every direction around the metropolis of Devon, numerous specimens of sheep were collected. From Exminster, in the south, were the choicest of the flocks of Messrs. Drew, Gibbings, Turner, with J. and W. Wippell, to which may be added the South Downs of Sir L. V. Palk, and of Messrs. Kekewich and Ley. From the west came the flocks of the Messrs. Kingdon, Potter, Redmore, Reynolds, Thomas, and W. Weppell. Few villages could have contributed so many and so good as came from Alphington. From nearly the same direction were the sheep of Mr. Francis, of Crediton. From the north-west came the beautiful pens of Mr. John Bodley, of Stockleigh Pomeroy, while Mr. Pridham, of Cheriton Fitzpaine, had some sheep that were justly admired.

Several of the cattle, bulls, dairy cows, and working oxen, were of a very superior kind. The pigs were numerous, and did much credit to the breeders.

Sir Thomas Ackland presided at the dinner and the distribution of the prizes.

The first class of prizes did honour to the Society and to human nature. It was those that were distributed to the agricultural labourers and servants—who lived upon or were connected with the respective farms, and whose labour and honesty, and good service, their employers highly and truly appreciated.

The first of them had lived with Mr. William Jarman, his father, and grandfather, 64 years, including his apprenticeship, and had distinguished himself for honesty, sobriety, and general good conduct. The next had lived on the farm of Mr. John Forster, 61 years, and had borne an unexceptionable character.

The third had brought up a family of 11 children without parochial relief, and was a man of the most industrious, sober, and steady habits.

The fourth had brought up a family of 11 children, and the sixth one of 10 children, without parochial relief, and had borne excellent characters.

One maid servant had lived in the same family 41 years, and another 39, and two others 34 years, and all of them had conducted themselves honestly and creditably.

The Chairman ordered them to be admitted. The respectful manner in which they advanced—the subdued feeling, and yet the honest exultation, which every countenance expressed, left an impression on the minds of the members of the Club that will not soon be forgotten.



The Chairman, in a very kind and feeling manner, described the deep satisfaction which the Society felt in presenting to them these rewards for their good conduct through life. The men who had resided 40, 50, and even 60 years on the same farm, could not be otherwise than honest, attentive, and industrious in the concerns of their employers. This was not only creditable and honourable to themselves, but also to their masters; for good servants lived with good masters, and remained with them, as surely as they were treated kindly. Between master and servant, long services faithfully performed produced lasting attachment. Masters looked upon such servants as those whom he now addressed as old and esteemed friends. He then cordially shook hands with each of them, and told them that, as they left the room, they would hear three hearty cheers given to "An honest peasantry their country's pride."

The healths of the judges were then drunk and responded to by Mr. Webber, after which the adjudication of the prizes for shoeing-smiths was read by the Secretary.

The first prize of £2 was awarded to Wm. Davy, working for Mr. R. Read, veterinary surgeon, Crediton, for the best set of shoes for hack-horses, and fixing a set in the best manner:—£1 to W. Harris, for the second best; and 10s. to James Wright. The judges also desired to express their satisfaction at the general excellence of the shoeing, which they thought highly creditable to all the competitors.

On the suggestion of Mr. Hussey, Mr. Read stated that, in his opinion, the shoeing generally was very good, and all the competitors were entitled to some merit. As he was one of the judges for horses, he begged to return his thanks, and those of the two gentlemen who had acted with him, for the honour which had been done them, and he would beg permission to state what had occurred during the examination of the morning. Very few horses had been exhibited, and of them there was not one to which they could honestly award a prize. One horse had a plain and palpable lenticular cataract. Another had decided ringbone. There was not one that had not something or other wrong about him. He and his brother judges were therefore of opinion, that all the prizes, except in one case which he would presently mention, should be withheld in the present show; and that it should be regarded in future as a rule, that no horse labouring under disease, or malformation which is likely to be, or which there is the chance of its being, propagated to the offspring, shall receive a prize. The horses on which the honours of the Society are bestowed shall be perfect in their kind. Strict attention to this

rule would go far to banish many diseases from our stables, which are a disgrace to our societies and to the country.

If the Royal Agricultural Society could be induced to adopt a similar resolution, it is scarcely possible to calculate the good that would be produced.

The judges had, however, recommended for a prize a cart mare and a foal, about which there was nothing wrong, although, if any valuable horses had been exhibited, the mare and her foal would probably have been passed over.

*The Chairman* very warmly and properly expressed his hope, that, on a future occasion, the show of horses would be better. He hoped that they would not degenerate, and go back to the old Devonshire hack-horse again; and that gentlemen would not fancy that, because McAdam had made the roads smooth, and the shoeing-smiths had carefully performed their duty, there was no occasion to improve the breed of the horse.

*Mr. Sillifont* said, that after the description which they had of the horses, and when they were told that the best of them did not deserve a prize, and they had further heard that the only gentleman who had shewn any thing worthy of the notice of the society was a lady, he trusted that they would drink his toast with enthusiasm :—"The plough and the fleece."

The adjudication of the prizes for sheep was then read, to which succeeded that of cattle.

On the healths of "The successful candidates" being drunk, *Mr. Kekewich* made the following beautiful reply. He said that he little expected to address them as one of the successful candidates : that was an honour to which he did not expect to have attained. He then proceeded to enlarge on the importance of the agricultural interest, observing that, in his opinion, on it the prosperity of the country depended. Those were engaged in it who lived on the soil, and were attached to the soil, and would leave it unimpaired to their posterity—who were the pride and glory of our native land—and who expended their capital and enterprise in contributing to make this country the first in the scale of nations. They lived in a time of great public excitement; but in this society they could throw aside all questions but one, and meet in the greatest harmony and cordiality. While turbulent and stormy discussions were taking place without, here was peace and concord within; here they could be united while the storm was raging without. They could join hand in hand, and heart with heart, in endeavouring to promote the interests of agriculture. Much had been said about the relative condition of Devon and Cornwall with respect to agricultural improvement; that,

however, might soon be put to the best test, as he believed that the next meeting of the English Agricultural Society would be held so near to this neighbourhood as to give both counties an opportunity of deciding the point. Whichever might be successful, he would give three cheers for the victorious county. He would be always ready to do his utmost to promote agriculture, and to co-operate with those engaged in it. He fully valued their exertions, even those of the farm labourer who had that day been cheered by them, and who deserved those cheers.

The thanks of the meeting were afterwards voted to Mr. Rogers for the kindness with which he had granted the Society the use of his forge for the operations of the shoeing-smiths. Mr. Rogers, sen. being absent, Mr. J. H. Rogers briefly, but with much feeling, and shewing how deeply he was interested in the proceedings of the day, returned thanks.

Shortly after this the meeting dispersed.

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[How is it that the veterinary surgeon is so seldom observed actively employed in scenes like this? Who ought to be so good a judge of the relative merits of the candidates? In his judgment of the horse he should have no compeer; and the time we trust is not far distant, when the value of his opinion with regard to cattle and to sheep will be eagerly sought. The simple fact too often is, that his education has not prepared him for this honourable course. He is not a farmer's man. He is not endeavouring to make himself so. He is jealous of the farmer. He is afraid that some little secret of practice will be divulged. Oh! foolish and false calculation, but that which is far too often made. Just in proportion as he identifies himself with the pursuits of the farmer, will he be respected and employed; and just as, churl-like, he wraps himself up in his own foolish ignorance, will he be avoided and despised. If he does not make himself acquainted with the common rules and practices of agriculture—if he is a mere child when he is questioned respecting the weight and the value of live or dead stock—if, as he walks with the farmer over his grounds, he shews himself perfectly ignorant of many a common agricultural procedure, why he may for awhile wrap himself up in his ridiculously assumed importance, but he will soon be treated with the neglect and contempt that he deserves. The hour of mystery is now passed away; and he is foolish, indeed, who betrays his consciousness of his incapacity, by anxiously avoiding every situation and every pursuit that would endanger the continuance of his false and ridiculous presumption.—Y.]



# ROYAL AND CENTRAL SOCIETY OF AGRICULTURE:

A REPORT OF THE MEETING FOR THE RECEPTION AND CONSIDERATION OF MEMOIRS AND OBSERVATIONS ON PRACTICAL VETERINARY MEDICINE.

*Commissioners, MM. GIRARD, HUZARD, and YVART;  
M. BARTHÉLEMY, Reporter.*

Gentlemen,—THE Society has received, for the meeting of 1841, six collections of observations, containing, in the whole, fifty pathological cases; eight essays on different special subjects appertaining to the medical division of science, and which comprise in their details fifty-three cases and experiments; comprising, in the whole, a sum total of one hundred and three accessions to our general knowledge with regard to subjects of veterinary medicine and surgery. It has also received an interesting paper on the use of soda as an addition to the diet of herbivorous animals; and two other important essays, one on a new method of shoeing horses, and the other on the social position of veterinary surgeons in Germany.

The numerous works, and, more especially, the selection of the subjects which they contain—the scientific classification of the materials of which they are composed—the judicious appreciation of each particular fact—the logical deductions which are drawn from every statement or argument—the perspicuity, correctness, and accuracy of style in the majority of these works—tend not only to prove that a noble emulation is aroused, and a love of science diffused among veterinary surgeons, but also that this class of men, so useful, so indispensable to agriculture and to the cavalry, are daily rising in public estimation by means of their knowledge and the importance of the duties which they have to perform, and are escaping from that degraded social position in which ignorance of their real worth and services and old and despicable prejudices contributed to keep them. It cannot be too often repeated, that the period when veterinary surgeons were composed almost entirely of illiterate and uninformed persons is rapidly passing away.

The Society, whose approbation the authors of these memoirs have shewn themselves so anxious to deserve, cannot sufficiently congratulate itself on the resolution passed at the period of its reorganization, namely, that of holding regular meetings for the reception of essays and observations on subjects connected with veterinary medicine. Hence these meetings have mainly contri-

buted to the improvement of which we have been speaking by exciting a noble emulation among veterinary surgeons, which has led fathers to bestow a better education on their sons than they themselves received, and have thus enabled the sons to profit more by the instructions communicated at our schools than their fathers were able to do, and more fully to investigate all the invaluable secrets of our art.

We shall now, gentlemen, lay before you the different communications of our correspondents, recording the pleasure and satisfaction which the perusal of them has given us.

*Contributions from the Correspondents of the Society.*

M. *Cros*, veterinary surgeon at Milan, has addressed to us five cases of practical veterinary medicine, followed by some reflections on the carbonaceous disease designated *Glossanthrax*, and on Glanders.

M. *Jacob*, chief veterinary surgeon to the eleventh regiment of Dragoons and Chevalier of the Legion of Honour, has sent a manuscript entitled "*Observations on the Non-contagiousness of Chronic Glanders.*"

From the most remote period, glanders, that dreadful scourge and the prevalent cause of the loss of so many horses, has been considered as a peculiarly contagious disease. The most strict legislative measures have been taken, and the most minute and careful precautions adopted by government, in order to prevent the propagation of what has been considered as a plague or pestilence until towards the close of the last century, when some isolated facts occurred which puzzled the inquiring mind of a young veterinarian. Having, in due time, deservedly obtained a situation at the Veterinary School at Alfort, he succeeded in making some proselytes to his new belief among the professors of that establishment; and from that time the doctrine of the non-contagiousness of glanders was professed by a portion of the teachers of the school; and, as every thing that is novel, or which departs from old established opinions, is always attractive to the inexperienced youth, during the first twenty years of the present century the partisans of non-contagion increased so rapidly that their opponents soon found themselves in a decided minority. Some undeniable cases of the transmission of glanders often, however, occurred, and shook the new doctrine to its very foundation. The leaders of the anti-contagion party cut the knot they could not unravel, by asserting that there were two kinds of glanders; —the one chronic, very common, and not contagious; the other acute, rarely met with, and contagious.

Veterinary science had proceeded thus far, when Dr. Elliotson, of London, about ten years ago, published an account of certain pathological cases, which he represented as proofs of the transmission of glanders from the horse to the human being. Not long afterwards several similar cases, collected from the hospitals of Paris, were communicated to the Royal Academy of Medicine by several members of that assembly. An immediate re-action took place, and, at the present hour, the opinion, not only that glanders is capable of being communicated from one horse to another by infection, but also that it can be communicated to the human being, and that chronic and acute glanders are but two different forms of one and the same disease, is sustained by numerous partizans, especially among the medical profession.

The question, therefore, as to the contagiousness of glanders, is more than ever mooted among scientific men; and too much praise cannot be bestowed on those who endeavour, by diligent research, to decide, or throw some light upon it. M. Jacob, with whose zeal you have long been acquainted, was of opinion that, in the present state of the point at issue, the publication of the results of the experience of a considerable period might not be altogether useless.

According to this gentleman, glanders is a general disease, which gives rise to local phenomena. It is dependent on causes which act upon the whole frame, altering the nutritive property, and, consequently, the blood. This affection is complex, and requires a complex course of treatment. It presents various individual peculiarities which it is necessary carefully to observe. M. Jacob does not believe in the contagiousness of chronic *glanders*; and his opinion is founded on nearly thirty years' experience, during which time he has seen numerous cases that do not permit him to entertain a doubt on this point. He recites several of these facts, and then enters into some very proper considerations with respect to the disastrous consequences, that, if there really was any contagion, would result from the common practice in regiments, of placing sound horses in the stalls of others that have been sent to the infirmary as glandered, and without these stalls having been properly cleansed and purified. And, lastly, he winds up his Essay by a recital of thirteen experiments which he has made with a view to the elucidation of this point. Twelve of the horses experimented on were inoculated; in the thirteenth the glandered matter was injected into the tracheal artery. Your committee regret much that M. Jacob has not stated the length of time that the animals thus experimented on remained under the surveillance. A period of ten or twelve days, beyond which, with one exception, he gives no account of them,



does not appear to be a sufficient time to authorize the conclusion that they had not been infected. M. Jacob is too talented a man not to acknowledge the justice of this remark. It is only necessary to fill up the hiatus that we have pointed out in order to make his experiments exceedingly valuable.

*Communications from Gentlemen who do not belong to the Society.*

#### COLLECTIONS OF OBSERVATIONS.

M. Canu, veterinary surgeon at Thorigny (Manche), who has already received a silver medal from the society, addresses a collection of six cases of veterinary practical surgery to you. The four first relate to a peculiar species of displacement of the uterus observed in the cow during gestation. In each of these cases, that portion of the womb which ought to have been connected with the left flank was found in connexion with the right flank. This displacement had given a tortuous direction to the neck of the uterus, which frustrated all attempts to effect parturition. The cows died, because it was impossible to remove the foetus from them.

In the fifth case, M. Canu, after having pointed out the various accidents to which cattle are exposed when an apple or potatoe, from being swallowed too greedily, becomes impacted in the œsophagus, and after describing all the known means to which farmers and country people have recourse on such occasions, and the fatal results which too often succeed the application of these means, relates a case of rupture of the œsophagus which healed spontaneously.

The last case contains a fresh example of the possibility of effecting a cure when the metacarpal bone of the horse has become fractured.

M. Lecoq, veterinary surgeon at Bayeux (Calvados), perpetual secretary to the Veterinary Society of the department of Calvados and La Manche, and on whom the Society has already bestowed certain well-deserved honours at the meetings in 1831-33-35-38, and 1840, has this year sent a collection of twelve cases, most of which are of an interesting nature.

The two first relate to metritis, complicated with gangrene of the mucous membrane of the utero-vaginal canal in a cow. The third had relation to the poisoning of a cow by hemlock (*conium maculatum*). This animal, to whom hemlock had been given, intermingled with grass, exhibited all the symptoms of having been poisoned when M. Lecoq was called in. A bleeding of six

pounds, and the administration of thirty-six decagrammes of acetate of ammonia\* in four quarts of water, given in two doses, with an interval of three hours between them, speedily removed all unfavourable appearances.

The other cases are designated under the titles of “*Paralysis of the Jaw of a Calf—Carcinomatous Tumour, situated on the Tail of a Cow—Hemorrhagic Nephritis in a Horse—Essential (Encephalitic) Vertigo in a Cow—A Mangy Affection, accompanied by singular Phenomena occasioned by an improper use of Sulphate of Potassa in a Horse—A case of Difficult Parturition, and Torsion of the Neck of the Uterus in a Cow.*” Then come two cases of a disease in horses termed *Synovitis of the Articulation of the Knee*. In both these the disease had resisted every means employed for its cure. M. Lecoq had recourse to puncturing the synovial capsule, and blistering the part affected. This bold and judicious mode of treatment was successful in both cases. A case of *Imperfect Dislocation of the Cervical Vertebra in a Calf* terminates this collection. M. Lecoq cured this with the assistance of the ingenious apparatus recommended by Gohier, modified so as to suit the peculiar indications which presented themselves.

The communications of this gentleman have particularly attracted the attention of your committee; they consider them as a fresh justification of those decisions that have led you to bestow on him the numerous rewards which he has received from this Society.

M. Raynal, veterinary surgeon to the first regiment of Lancers, is the author of a manuscript, entitled “*Observations and Experiments on the Treatment and Consequences of Fistulae in the Parotidian Canal of the Horse.*”

This manuscript contains five cases and various experiments. In each of the cases which form the subject of these observations the parotidian canal had been accidentally opened by the actual cautery. In four of the patients the flow of saliva ceased spontaneously from about the thirteenth to the sixteenth day, reckoning from the first opening of the wound. The only means taken by M. Raynal, in order to obtain this interesting result, was submitting the animals to a course of diet composed of food which required little mastication. By means of this, he prevented the secretion of an abundant salivation, and avoided those fatal results which always follow, in similar cases, the escape of a large quantity of saliva, which, by forcing its way through the fistula, prevents its cicatrization. In the other patient, M. Raynal seconded the effects of the regimen of which we have just spoken

\* A decagramme contains about 154 English grains.



by the application of a blister round the wound—his aim being to create a tumefaction of the parts, and thus establish a natural and permanent compression of the fistula. The cure was as rapid in this as in the other, hence the author has been led to conclude, contrary to the opinion of many veterinary surgeons, that wounds in the parotid duct are not very dangerous, and that the persistence of fistula, inflammation, suppuration and gangrene of the parotid arises from the use of plugs, pledgets, sutures, ligatures, cauterizations, &c. all of which the author unreservedly condemns.

In pursuing his experiments, M. Raynal has proceeded in the following manner: he made a longitudinal incision of about fifteen millimetres, or nearly two inches in extent, in the parotidean canal of three horses. Two of these animals were left to the care of nature. The flow of saliva increased until about the seventeenth day, after which time it diminished, and had entirely ceased about the twenty-fifth or twenty-seventh day. He applied a blister to the third horse, the effects of which were seconded by the approach of the heated iron. Considerable swelling supervened. The flow of saliva speedily decreased, and ceased entirely about the fourteenth day. The same experiments have been several times repeated without any variation in the results, and M. Raynal concludes that, when the salivary fistulæ are occasioned by a sharp instrument, recourse should be had to this mode of treatment. A post-mortem examination of three of the horses experimented on proved that the cicatrization of the wound had not caused the obliteration of the canal.

M. Raynal has added to his communication on salivary fistulæ two cases of caries of the third sternal rib in the horse; in both of them the removal of the diseased part was effected with success. This gentleman's communications on fistulæ of the parotidean canal are exceedingly valuable. The practical facts contained in them, united with those already known, will contribute materially towards the solution of a very important therapeutical question. Your committee think that M. Raynal should have honourable mention made of him in the report.

A collection of six cases is addressed to you by M. Eléouet, veterinary surgeon in the district of Morlaix (Finistère), secretary to the Agricultural Society of that place, and perpetual secretary to the Veterinary Society of the department of Finistère.

Three of these cases relate to the extirpation of the globe of the eye practised with success on dogs. The mode of operating adopted by M. Eléouet is simple, the execution of the operation easy and prompt, and there is no danger. More than twenty years ago, when we were professors of clinical medicine at the



school at Alfort, we operated before the pupils in a similar way to that adopted by this gentleman : but, after the extirpation had been effected, we inserted pledgets into the orbit, which M. Eléouet does not, and as no accident results from the omission, his mode of treatment is an improvement.

The fourth observation is entitled “ *Cystocele in a Foal eight Days old.*” This case is the more remarkable from its probably being the only example of inguinal hernia of the bladder that has ever been observed in the horse. As this hernia, with the nature of which M. Eléouet was necessarily unacquainted, was complicated with strangulation, he decided, in conjunction with his fellow-practitioner M. Morel, on proceeding immediately to make an incision into the testicular ring ; but as soon as the hernial sac was opened, the operators saw at once that it was the base of the bladder which they had before them, and not a curve of the intestine. Having forced all the urine contained in the strangulated portion of the bladder through the ring by means of suitable compression, the reduction was effected without any preparatory incision. Proper pledgets were then placed on the part, and the hernia did not return. For eight or ten days the little patient appeared to be going on as well as possible, and the most satisfactory results were anticipated, when, a few days afterwards, the animal died in consequence of a vast purulent deposit, which extended from the opposite inguinal region to that which had been the seat of the hernia, and to the trachelian prolongation of the sternum. The bladder appeared to be very nearly in its natural state.

The fifth case has reference to an instance of reversion of the uterus in a cow, where the primitive accident became complicated with a rupture in the organ, across which the hand of the operator had to pass. M. Eléouet terminated the operation without taking any notice of the rupture, and the animal perfectly recovered. This is a new fact to be added to those already registered in the annals of science, and which tend to prove that wounds in the uterus are far from being so dangerous in the cow as many are inclined to believe.

M. Eléouet concludes his manuscript with an account of a case of *enormous entero-hydrocele* observed in a foal three years old. The inguinal ring was so much dilated that a person could without difficulty push back its contents, and even thrust the hand into the abdomen through this opening. The hand being withdrawn, the hernia re-appeared. M. Eléouet began by puncturing the testicular sheath in order to get rid of the hydrocele. On the following day he proceeded to the reduction of the hernia, and, to prevent a recurrence of it, he castrated the covered testi-

cle, and placed the clams as near as possible to the inguinal ring, conformably to the plan usually adopted in cases of this nature. His success was complete, and a radical cure was effected.

M. Eléouet, who addressed several communications to you last year, is a very distinguished veterinary surgeon, whose zeal and abilities are well worthy the attention of the society. Your committee recommend that a silver medal should be awarded to him.

[To be continued.]

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## CASES OF VERTIGO IN THE HORSE.

*By Mr. Jos. WOODGER, Paddington.*

ON December 2, 1840, I was desired to attend two mares, belonging to Mr. Carpenter, that were attacked by the prevailing epidemic. The symptoms were, loss of appetite—defluxion from the eyes, the lids of which became rapidly swollen—drooping of the head—frequent shifting of the limbs, and the pulse weak and quick, and ranging from 60 to 70.

I gave a drink composed of spirit of nitrous ether, nitre, and emetic tartar, and repeated it in the evening. This I continued until the 6th, when the urgent symptoms had subsided, and the horses were sent to the owner's farm, with orders to give them scalded oats and bran, and balls composed of gentian and ginger.

They appeared to be going on well until the 12th, when the owner had them taken up to go to work. They were put into the stable, and fed the same as the other horses.

On the 13th, at seven o'clock in the evening, I was sent for in great haste, the messenger telling me that one of them was in a fit. When I arrived there the mare was standing, but apparently unconscious of surrounding objects. I went to her head, and, putting my fingers under the maxillary bone in order to feel the pulse, she suddenly fell on her side. She got up, however, without any assistance in a few minutes. I cautiously approached her a second time, and found the pulse 50, and full. I bled her to the amount of six quarts, and gave her three drachms of aloes.

On the next day she was apparently well; but, on the noon of that day, the other was attacked in the same way. The treatment was the same, and accompanied by the same result.

The owner asked my opinion as to the cause of these sudden and violent attacks. I told him that it was the too highly stimulating food and over-distended stomach, and that the functions of

the brain were disturbed or suspended by the additional quantity of blood determined to it. By giving me your opinion, you will oblige your's, &c.

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[There can be no doubt about the matter. Mr. Woodger has hit on the veritable cause, and the owner may think himself fortunate that he did not lose one or both of his horses.—Y.]

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## A CASE OF RUPTURED SPLEEN IN A HORSE.

*By the same.*

ON Dec. 31, 1840, I was desired to look at a black gelding, the property of Mr. Reynolds. The servant said that the animal had the belly-ach. When I arrived, I found the horse lying down, and looking backwards towards his belly. I inquired how long he had been in this state, and was told that he had been fed as usual at noon. Half an hour afterwards, it was observed that he had not fed, but was very uneasy, pawing with his feet. At three o'clock the attendant came for me. The pulse was almost imperceptible, the extremities warm, and there were the general symptoms of spasmodic colic.

I gave him a pimento drink, and injected some warm water, and said that I would see him again in an hour. I was punctual to my time, but found him no better. The owner wished me to bleed him; but the state of his pulse told me that if I did so he would certainly die. I gave him another pimento drink.

From the pallidness of his mouth and the coldness of his extremities, I began now to suspect that there was internal hemorrhage, and I communicated my suspicion to the owner, telling him that I was quite convinced that the animal had not long to live. At half past five o'clock he died.

On opening the abdomen, I found the cavity filled with coagulated blood, and I expected to find rupture of the liver; but, to my great surprise, it appeared that all the hemorrhage proceeded from the spleen. This viscus was not more than its usual size, and, with the exception of a rupture of about three inches in length, appeared to be perfectly healthy. The 28th was the last day that he had worked, and he then worked very hard in getting up some barges.

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## AN ACCOUNT OF A LARGE MESENTERIC GLAND DESTROYING A HORSE.

*By Mr. ALEXANDER DUNLOP, V.S., Airdrie, Lanark, N.B.*

ON October 17th, 1838, I was sent for to see a horse that had been bought about eight days before, and which was now taken ill. I thought it was colic, and gave a drink composed of linseed oil, turpentine, and opium. I also back-raked and clystered the animal. The pulse was about 50.

I saw him again in about an hour afterwards, and there was very little difference in the symptoms. I now thought it right to bleed, and I abstracted six quarts of blood. I also again back-raked him, and felt something solid, which I thought was hardened fæces. I gave another clyster, and administered four drachms of Barbadoes aloes, with plenty of gruel.

11 P.M. he appeared relieved. I heard no more of him for some days; but then I was sent for in great haste. I found my patient in a worse state than before. The pulse was 65; the animal appeared to be in great pain, and was much exhausted. He had a peculiar way, as he stood in his stall, of turning half round, and standing in that posture for five or ten minutes. He would then lie down and turn upon his back. I bled him, fomented his belly, and again back-raked him, in doing which I could still feel something hard with the tips of my fingers. I gave plenty of gruel, which was the only thing that seemed to relieve him.

As I had to go out of town I did not see him for some hours after this. I then found him hardly able to rise. Sometimes he seemed to be considerably relieved by pressure on the flanks; but, at other times he evinced very great pain from pressure. I saw that it was all over with him, and so I told the owner. The horse died on the same evening.

On opening him, I found a tumour 16 lbs. in weight, the colon adhering to it, and being twisted around it in three places like a claw. It appeared to me to be an enlarged and diseased mesenteric gland. I dissected the tumour from the colon with scarcely wounding the intestine. There were two places at which the colon was very much contracted; there were likewise inflammatory spots upon the colon where it was twisted round the tumour. In every other part the intestines were perfectly healthy. The weight of the tumour and the contraction of the intestine caused the colicky pains by the partial obstruction of the fæces which they contained.

The tumour being removed from the intestine, and cut through, much resembled a tuberculated lung. It was formed of different cells containing pus, or a cheese-like matter, and in the centre was a hard cartilaginous substance. Some of the cells were as large as a duck's egg.

The owner had bought this horse warranted sound, and she summoned the man from whom she had bought it, to return the price she had paid. I was called upon to give my opinion, whether the horse was sound or unsound at the time of sale. I could not for a moment hesitate in stating that it was absolutely impossible that a tumour so enormous could have been formed in the short space of eight days. I also mentioned that the horse, before the time of sale, had often exhibited apparent colicky pains.

Mr. Moore, veterinary surgeon at Hamilton, told me that he had attended this horse during several months, and had advised his employer to sell it. He did sell it at one of the Falkirk trysts, where it was bought by Mrs. Black.

The price of the horse was returned to Mrs. Black, and all expenses paid.

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## ON THE EPIDEMIC IN CATTLE.

*By Mr. JAMES DAWBER, V.S., Liverpool.*

I HAVE intentionally neglected to respond to your circular, addressed to me, regarding the epidemic disease which has of late been so prevalent among cattle, in consequence of every day bringing it more under my notice. Had I replied immediately, I should not have been able to add any fact to those of which you are already in possession: but within the last week my attention has been drawn to several cases which in some measure differ from any that I have seen or heard of. The whole of one farmer's stock in this neighbourhood has been attacked within twenty-four hours' time with the disease in a most aggravated form. Not only have the feet and mouth been sufferers, but the udder, and I may say to an alarming extent. One quarter of the udder was found enormously swollen, almost black in colour, hot and tender; the animal appearing to be labouring under the most excruciating pain, breathing laboriously, the pulse strong, full, and quick; in short, all the symptoms were those of the most violent inflammatory fever. My treatment has been of the antiphlogistic kind. I have been compelled to bleed largely, and repeat it, before I could in any

way combat the symptoms. I know not how one case may terminate as yet, the congestion in the udder being so great that I fear gangrene will take place: in fact, the teat and a small portion of the quarter was this morning deathly cold; but I am told this evening that the warmth is somewhat restored. Should you think the history of the cases worthy (as also the past cases I have had) the pages of your valuable periodical, I shall be most happy to prepare it for you.

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[The Editor will most thankfully receive the cases to which Mr. Dawber refers.—Y.]

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## THE VETERINARIAN, JULY 1, 1841.

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*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

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ANOTHER session has nearly winged its flight, and the principal portion of the instruction of the veterinary pupil will be suspended until the close of autumn. What progress has been made towards the completion of the noble object of the founders of the College, the establishment of veterinary science—a knowledge of the anatomical structure of all domesticated animals, and of the means by which their diseases may be prevented or relieved?

There still remains the professor of equine pathology. He worked hard for the situation—he has won it, and no one wishes to displace him.

The professorship of equine anatomy and physiology remains with Mr. Spooner, and it cannot be in better hands. Many an excursion does he make into other and kindred regions, to the delight and the benefit of his pupils.

The professorship—we beg pardon, the lectureship—on veterinary pharmaceutics continues with Mr. Morton. Surely the day cannot be far distant when the importance of this division of veterinary instruction will be universally acknowledged, and its professors receive their due reward.



The lectures of the demonstrator improve. He becomes better acquainted with the duties of his office, and he is a valuable officer of the institution.

But there are other branches of study even more important and far more connected with our agricultural interests—the treatment of the diseases of cattle and sheep. Are they better attended to? To a certain degree we answer, yes. The lectures of the Professor contain more frequent allusions to them; there are also more frequent repetitions of certain favourite points; but *there is not the close and direct attention to such a subject which it deserves.*

Mr. Stavely has given the students some advantages which they possessed not before. He had previously the care of one of the great milk establishments at Islington, and he has endeavoured to enlarge his cattle practice. He has given permission to a certain number of the students to attend at certain hours, and witness his practice on the cases of disease that occur. To some extent this is advantageous, and the students will get many a useful hint with regard to the treatment of large dairies in populous towns: but his dairy and his hospital are at a considerable distance from the College, and an attendance on them interferes materially with the dissections, and lectures, and clinical proceedings at the College, therefore the students are comparatively few who constantly or often visit the Islington dairy. Besides this, the practice in these large establishments is essentially different from that which the pupil will adopt when he goes into the country.

Some good has undoubtedly been derived from Mr. Stavely's exertions; but not so much as would have resulted from attendance at a situation nearer the College, and where other avocations would not be interfered with.

Has any progress been made in the study of the diseases of sheep? Letters to the Professor, requesting his advice on certain points, have been received; but here, not having had any personal experience, he has been naturally and necessarily at fault. One of these cases was recorded in *THE VETERINARIAN* of the last month: we must, however, recur to it again. A flock of sheep had long been fed on dry healthy land, *and the weather was exceedingly*

*dry.* They begin to lose their condition—they waste away, and many of them die of evident affection of the liver—*there are no flukes*, but the liver is nearly wasted away.

The bailiff, by the order of his master, writes to Professor Sewell on the subject, who does not profess to understand the nature of the disease any farther than that “it probably originates in inflammation of the liver.”—There needed no ghost to tell us that—“and that the variable temperature which had prevailed, (Qy.) and probably some peculiar state of the situation, might favour a tendency to the disease. A change of place and aspect, and food to a certain extent, should be tried in the first instance, at least in those that appeared to be affected.” Presently, however, comes *a night of rain, and the mortality among the sheep ceases at once*, and the bailiff does not find it necessary to separate any fresh case from the flock.

Little or nothing needs to be added to the above account. It speaks sufficiently for itself. That and a few other cases, in which the disease was completely misunderstood, induced the first sheep-breeder in our country to write to the Editor of this periodical, that, “in his opinion, there was very little indeed of the diseases of sheep known at the St. Pancras School.” How, in point of fact, and without any disrespect to Mr. Sewell personally, can it be otherwise? What opportunity has that gentleman possessed of acquainting himself with the diseases of sheep and cattle? How can a man learn without having been instructed? How can he practise without having been taught? In point of fact, how comparatively few—not many more than a dozen—of these animals have found their way to the St. Pancras Infirmary during the five-and-thirty years that he has been there; and how few and far between have been the opportunities of his becoming acquainted with the real nature, and cause, and treatment of their diseases!

Is Mr. Sewell flattering himself that he is acquiring useful knowledge on these points. He, as well as the writer of the present leader, is arrived at a period when he is far more likely to yield to the infirmities of age than promptly to accumulate, and decidedly to carry into practice, new principles and views.

There are half a dozen practitioners, or more, in various parts

of the country—men of observation and talent—who were born and bred among cattle, and who would be fully qualified to give instruction on the diseases and general management of these animals. Why is not one of them selected and employed? Mr. Sewell would have no cause to complain. He would be still left in the situation occupied by Professor Coleman.

The connexion between Mr. Sewell and the Royal Agricultural Society of England, of what nature is it? Mr. Sewell is with them *the representative of the Royal Veterinary College*. They have nothing to do with his appointment, or with his removal, except he neglects his duty and does that which is flagrantly wrong; and therefore it is that, to our great annoyance, we are told by members of the society and of the council, that we must fight—the profession generally—our own battle—that they have nothing to do with our grievances, and that their power is confined to the compelling of our representative to do a portion of his duty.

There is some truth, but much more sophistry, in this reasoning; yet we would not complain, if the Royal Agricultural Society will see that the duties of the representative of the Royal Veterinary College are efficiently performed. Have they done this?

To the Governors the profession must look—to them they must make their appeal—calmly, deliberately, but firmly. Are the students at present efficiently taught? Would the pupils, previously unacquainted with the maladies of cattle, sheep, and hogs, learn enough at the St. Pancras School to undertake confidently and honestly their treatment? Who will or can say that they would? Then it is the duty of the Governors to make the system of instruction that which it ought to be, and to fill up the hiatus in the collegiate education which, suffered to remain, will inflict indelible disgrace on the institution and its managers. This is a matter which calmly, deliberately, firmly, we submit to their consideration; and it is founded on common sense and common justice. A memorial to this effect should be presented to the Governors. It is of no use to apply to the Agricultural Society until the matter becomes too flagrant to be borne. There would be the same reply: “you must fight your own battle.” Any service that we can render will be at the disposal of our brethren.



Of the character and results of the late scholastic year we speak with reluctance and pain. From the foundation of the College to the present day, there never was a session more unfavourable to the improvement of the pupil. The lectures were delivered at the usual periods, but the students carried not with them to the theatre or to the dissecting room a mind capable of close attention to the subjects before them. They were divided into parties. There were those who were anxious to prepare themselves for the duties of after-life, who earnestly desired the improvement of their art, and were ready to contribute, and did contribute to the utmost of their power, to the utility of their periodical meetings. A still larger party, adopting a spirit of exclusiveness, would contribute nothing to the general fund, but at the close of each periodical meeting of the Association adjourn to some neighbouring public house, and there, in conclave close, sit in judgment on what they had heard, and whisper to each other the opinions that were not to spread beyond their own exclusive circle.

The visits of practitioners became more unfrequent and irregular. Those from whom much useful information had been formerly derived either came not at all, or were silent when they did come. The reporter had not been sufficiently accustomed to medical subjects and medical terms. His reports, therefore, were not always so accurate as they should have been, and family afflictions and long illness materially increased the imperfections of his notes.

In the mean time the students became more divided into sections and parties, and ill-feeling and discord usurped the place of friendship, union, and mutual improvement. The efforts of the Professors generally were, to a certain degree, neutralized. At the lectures, in the dissecting room, and at the Association, the baneful influence of discordant feelings were too frequently evident. In the meetings of the Association the writer of this had, towards the close of the session, opportunity to witness the zeal with which Messrs. Spooner and Morton pursued the straightforward and honourable path of duty. The former was present whenever his avocations or his studies would permit: the latter was always at his post. They were ever ready to communicate instruction; but they could not always view the scenes that

occurred around them without regret and pain. May the next session be more propitious to the veterinary art.

To one subject our attention is unexpectedly called—the warning of a kind and judicious friend, and to whom we return our most cordial thanks.

There have been for many years past a certain number of practitioners averse to the diffusion of veterinary knowledge beyond the circle of the profession. The periodicals have long been viewed by them with dislike and distrust. They are supposed to have been the means by which many points of useful knowledge were brought within the reach of the cowleech or the farrier, or, occasionally, the owner of the patient.

A circumstance, however, occurred in May 1840, of the most outrageous character. The English Agricultural Society, anxious to stem the progress of the epidemic that *prevailed among cattle and sheep*, requested Professor Sewell to draw up a statement of the nature, and causes, and symptoms, and treatment of the disease, to be sent, *not to veterinary practitioners, but to every farmer who was a member of the society*; and he was instructed to purge and to bleed, and to do, probably, all manner of mischief, and then, when the animal was sinking, and the case was hopeless, he was advised to have recourse to the veterinary surgeon.

The Editor does not wonder at the language which was used in his friend's letter,—that “the practitioners viewed with alarm and indignation the public circulation of Professor Sewell's papers,” for no similar document ever proceeded from the veterinary school, nor do the records of human medicine contain any thing similar to it. The Editor does not wonder at the eagerness with which it was copied into almost every journal in the kingdom. Sent by a body of men like those who composed the Agricultural Society to every subscriber to their institution, it did incalculable, although we hope temporary, mischief to the veterinary profession. It likewise did—as all this quackery must do in the long run—incalculable mischief to the farmer. Hundreds of cattle were destroyed that would otherwise have escaped, and months were spent in the recovery of that condition which needed not to have been impaired. It was, we repeat, the strangest

and most abominable document which the records of human or veterinary medicine contain.

The Editor opposed to the utmost of his power this most irregular and unjustifiable act. He stated the folly of placing so many dangerous recipes in the hands of farmers and the bailiffs of landed proprietors. If the Society was determined to issue circulars, let them be sent to the veterinary surgeon, who would not abuse them, and not to the uneducated—medically uneducated—man, by whom they would be misunderstood, and in whose hands they would be a source of mischief. On this hint circulars were sent to the veterinary surgeons—but they were also sent to the farmer, the Chairman observing, and repeating the observation, “that he hated quackery; that the exclusive confinement of the circular to the veterinarian looked very much like it, the only distinction which he knew between the scientific man and the quack was, that the former was ready to communicate every thing that would be useful, and the latter was anxious to keep every thing to himself.”

The Editor’s friend proceeds to say, that “the Profession are making a stand against the farther publication of their experience and opinions that are not *exclusively circulated among them*. That they view with alarm the eagerness with which these things are copied into other journals. The stand which they have thus taken amounts to this,—that the profession refuses to contribute one single iota of their experience unless *it is exclusively circulated for the sole benefit of the body at large*.”

And now “his friend” will permit the Editor to thank him most sincerely for this avowal. He is now aware of the ground on which he stands, and the difficulties with which he has to contend. Supported by the kind exertions and literary contributions of the profession, he has been enabled to raise THE VETERINARIAN to the standing which it occupies among the journals of this country and of Europe. He observes with honest pride the approbation with which it is received in every scientific institution at home and abroad; AND WHILE HE LIVES IT SHALL NOT LOSE ITS GRADE. So far as he and his friends can make it, it shall be worthy of the cause to which it is devoted—the noblest in which a human being can be engaged—



the cure or the diminution of animal suffering. The principles on which it is founded, the course which it pursues, shall be plain and open as the day. He finds not the name of an Abernethy, a Bell, a Brodie, a Brookes, a Cooper, a Copland, a Clutterbuck, an Elliotson, a Ferguson, a Forbes, a Liston, a Prout, a Quain, a Roget, a Thompson attached to an exclusive society,—he finds not one of them so far degrading himself and the profession to which he belongs. He turns to his own profession, and he asks a Blaine, a Clark, a Dick, a Goodwin, a Lawrence, a Percivall, a Spooner, a Stewart, and many others, whether their honourable feeling, and the credit of the art which they profess, would permit them to belong to an exclusive society.

The foreign veterinary periodicals—are they printed for, and confined to, an exclusive society? Is there an instance of it in any part of Europe? *The disgraceful initiative shall not commence with THE VETERINARIAN.* The Editor defends not the circular of Professor Sewell. There are, perhaps, other communications thinly scattered through the pages of this periodical, in which the minutiae of treatment have been unnecessarily, and, perhaps, injuriously spun out. Is it true with our profession as with that of human medicine, that there are many uneducated persons lying in wait to avail themselves of, and to profit by, the discoveries of others. The charters which are now sought by the human and the veterinary professions will, ere long, to a very considerable degree, remedy this evil; but in the mean time, in proportion to the advancement of knowledge will the practice of the surgeon become more successful, and his aid be more anxiously sought. From the union of the veterinary surgeon with the agriculturist, and the confidence which will grow out of their mutual esteem, will result the successful progress and triumph of our art, and that to an extent which no exclusive system could possibly produce.

This subject, however, demands deeper consideration. Will some of our friends kindly take it up? In the mean time, the Editor will continue to cherish friendly feelings towards those who are at present opposed to him; and he challenges one or all to meet him on any particular point which they may select, connected with the present topic.

Y.

## SMALL-POX IN THE DOG.

*By M. U. LEBLANC, M.V., Paris.*

[Continued from page 368.]

THE causes which produce the greatest variation in the periods of the eruption are, the age of the dog, and the temperature of the situation and of the season. The eruption runs through its different stages with much more rapidity in young dogs—in dogs from one to five months old—than in those of greater age. I have never seen it in dogs more than eighteen months old. An elevated temperature singularly favours the eruption, and also renders it confluent, and of a serious character. A cold atmosphere is unfavourable to the eruption, and even prevents it altogether. Death is almost constantly the result of the exposure of dogs having small-pox to any considerable degree of cold. A moderate temperature is most favourable to the recovery of the animal. A frequent renewal or change of air, the temperature remaining nearly the same, is highly favourable to the patient; consequently close boxes or kennels should be altogether avoided. I have often observed that the perspiration or breath of dogs labouring under variola emits a very unpleasant odour, whether it be that the perspirable and fæcal matter is voided in large quantities, or there is an especial infectious odour. This smell is particularly observed at the commencement of the desiccation of the pustules, and when the animals are lying upon dry straw; for the friction of the bed against the pustules destroys their pellicle, permits the purulent matter to escape, and the influence of this purulent matter is most pernicious. The fever is increased, and also the unpleasant smell from the mouth and that of the expired air, and of the fæces, and the disposition which is rapidly developed in the lungs, to assume the character of pneumonia. This last complication is a most serious one, and almost always terminates mortally. It has a peculiar character. It shews itself suddenly and with all its alarming symptoms. It is almost immediately accompanied by a purulent secretion from the bronchi, and the second day does not pass without the characters of pneumonia being completely developed. The respiration is accompanied by a mucous râle, and which often becomes sibilant. The nasal cavities are filled with a purulent fluid. The dog, that coughs violently at the commencement of the disease, employs himself, probably on the following day, in ejecting, by a forcible expulsion from the nostrils, the purulent secretion which is so soon and so plentifully developed. When he is lying quiet, and even when he seems to be asleep, there is a loud stertorous guttural breathing.

I have never observed the abundant perspiration of which Barrier speaks—so abundant as to wet the place on which the animal lies. I have only seen variolous pustules suddenly developing themselves on the head generally, the lips, the throat, the borders of the eyelids, the vulva, the anus, the prepuce, and between the digitations of the paws. As I have already said, I have oftenest found them on the belly, the chest, the arms, the groin, and the internal surface of all the limbs. When they extend farther, they attack the inferior parts of the chest, and the feet.

As to the cure of the dogs attacked by variola, more benefit will be produced by an attention to diet than to any medical therapeutical treatment, especially when the disease is pursuing its ordinary course. The complications, however, which, when they occur, are, for the most part, very serious, must be combatted by the means which pathology indicates. I would, however, recommend to be very cautious of administering any medications that usually have powerful effect on the bowels. The purgatives and the vomits, which are so often recommended by the mere pretenders in the art, and, too much, by the false opinion of the public, are in the majority of cases fatal: they cause diarrhœa and dysentery, which destroy thousands of dogs.

After light sudorific drinks, consisting of infusions of elder and of borage, and mucilaginous enemata, I have seldom applied any thing more than rubefacients to the skin. The rubefacients, among which I reckon the flour of mustard, are most useful when the eruption seems to be prematurely disappearing, and when the respiratory organs are considerably affected.

The best mode of treatment, perhaps, consists in placing the animal in a temperature of from 50 to 55; and where there is sufficient ventilation to prevent any bad smell, and, during the period of eruption, to keep the patient on a limited diet. Rice, vermicelli, and panada, will afford sufficient nutriment. In many cases the appetite of the animal is scarcely lessened. A stricter watch must then be kept over him. Animal food should not be permitted until the desiccation of the pustules has commenced.

The principal motive which induced me to publish this memoir on variola in the dog, was a circumstance that appeared interesting to me under more than one relation. A person brought a young Newfoundland dog to my infirmary that had his belly, chest, neck, and limbs, covered with variolous pustules, and which, at the same time, had intense purulent pneumonia. He had been subjected to medical treatment, and, among other things, the actual cautery had been applied to his chest. The proprietor, who thought that his dog had the disease commonly designated "*distemper*," told me that he was much vexed that he had not



vaccinated the animal—that three other dogs of the same litter as himself had been vaccinated, and had been preserved from that dreadful malady, from which it appeared that they had no other chance of escaping. Time, however, unfortunately proved that he was wrong.

I had at that time several young dogs in my infirmary, and among them I remarked one that was variolous. I immediately adopted such measures, that the greater part of them very soon began to exhibit the same eruption. I thus executed that which I had long premeditated, and I inoculated two other young dogs with the virus of variola taken from a pustule in a serous state. In one of them, pustules developed themselves only around the puncture; in the other, the eruption extended to the belly, the chest, and the inside of the thighs, the inoculation having been made on the inside of the thighs. This dog had a well-marked eruptive fever. The disease ran its course in the ordinary way, and became perfectly cured. The other had no disease at all.

Believing that the variola would attack other dogs in my establishment, I determined to inoculate with the vaccine matter as a preservative. I wished also to ascertain whether the vaccine disease was a preservative against distemper. I, therefore, vaccinated three dogs, but neither of them became infected. The skin around the punctures became a little red and prominent, and the inflammation resembled that which would be produced by the prick of a lancet not charged with any virus, and it speedily disappeared. I repeated the experiment with fresh virus, but with no better success.

Among the dogs vaccinated, or rather punctured, or merely pricked, none had the variola; not, I apprehend, because they had been punctured, but probably their constitutions had not been disposed to take on the infection. Among the dogs were many that had distemper. This last fact was not an objection to vaccination as a preservative against the disease, since more than once the vaccine disease did not develop itself. The result of these experiments, however, was, that the vaccine disease was not communicated to the dog by inoculation with vaccine matter.

I return, however, to the Newfoundland dogs, of which I have before spoken. I had been assured that these dogs had been vaccinated, but had not taken the disease. Eight days, however, did not pass before one of the supposed vaccinated dogs arrived with evident distemper. He had lost his spirits and his appetite—he had cough—discharge from the nose—also from the eyes, and, a little afterwards, diarrhœa, flux of blood, and suppurative pneumonia. This dog died.

I observed in this dog,—that which I had often remarked in

other dogs, and particularly in his brother that died some days before,—that about the fifth or sixth day pneumonia became complicated with, or rather constituted the principal part of, distemper. The lungs were then almost entirely occupied by pneumonia: auscultation enabled us to hear only a mucous and sibilant bronchial râle. The movements of the heart were strong, slow, and yet so convulsive, as to shake the whole of the body of the animal, and yet the pulse in various parts could scarcely be detected. The difficulty which the blood would find in traversing the diseased lungs did not appear to be sufficient to explain this phenomenon, and especially in an animal moribund, and whose life was nearly extinguished. No peculiar modification of the sensibility of the nerves of the heart could account for this. In order to be enabled to describe this muscular contraction, so sensible to the touch and to the eye, I examined with great care the organs of circulation and respiration in the dogs that presented these symptoms during life. In all of them I found in the cavities of the heart, and particularly in the left ventricle, enormous clots which almost filled the whole of the cavities. These clots, which certainly existed during life, were composed of different coloured coagula. The part that was in contact with the walls of the cavity was of a grey white, but it became more coloured towards the centre, passing from a yellow to a rose colour, or to a red of variable intensity. I believe that the blood was physically decomposed in the heart during life. The outer layers of the clot were denser than the others, and at the centre was nothing but blood highly coloured. The different layers were traversed by certain bands, and by attachments to the valves from which they could not be separated without tearing the clot. Other clots of blood were found in the principal vascular trunks in the neighbourhood of the heart.

This state of the blood, which cannot be attributed to any disease of that fluid, well explains the violent movements connected with the contractions of the heart. In fact, the walls of the heart finding a resistance in its systole, in consequence of the density of the coagulated blood which it can no longer circulate, contract with increased energy, and the movement is communicated in an evident manner to all the neighbouring parts, and, ultimately, to the whole frame.

The coagulation of the blood before death appears to be, in this case, one of the principal causes of death. Besides, it alone is sufficient to destroy life. In order to be satisfied of this, the animals should be opened as soon as possible after death, that that may not be considered as the cause of death which is only the effect.

This fact being proved, it may perhaps be useful to search for

some means to render the blood more liquid and less coagulable during life. I have already mentioned bleeding as the most effectual method. An increased quantity of fluid would be next in efficacy. Some medicines may also possess this property, but that does not appear to be sufficiently proved to merit much confidence.

I beg my readers to pardon this digression, but my subject led to it: besides, facts are always worth publishing.

As to variola, it appears to me to be demonstrated,

1. That this disease is very frequent in the dog.
2. That it is contagious in him as well as in other animals.
3. That inoculation gives it a milder character, and that this operation should undoubtedly be practised when variola is prevailing among the dogs in any district.
4. That very simple treatment suffices when the disease runs its regular course.
5. It results from what has been stated, that the vaccine disease cannot be communicated to the dog by inoculation.

*Journal des Haras.*

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[This is an interesting and valuable paper, but it does not quite suit with our experience on this side of the water. Will some of our correspondents favour us with their opinion on certain points contained in it? When somewhat at leisure—two or three months hence—we shall probably have a word to say about it.—Y.]

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## OBSERVATIONS ON SOME DISEASES OF THE HEART.

*By M. FRANÇOIS DELALANDE, M.V., Ouéry.*

THE profound obscurity in which veterinary practice has, until lately, been involved with regard to the diseases of the heart and pericardium—the absence of all characteristic symptoms, by the aid of which we may recognise, in an unequivocal manner, their existence during life, and the want of the necessary pathological facts to state them with precision; induce me to lay before my brethren the observations which I have made on animals affected with these diseases.

Perhaps, however, it is my previous duty to examine the little which our masters have said about it, and also the opinions and scientific observations that medical men have held and propagated on this subject.

“Carditis, properly so called,” says Hurtrel d’Arboval, “that



is to say, the primitive and not the complicated disease, has not yet been described in a tangible manner as it exists in the quadruped; and no one has yet recognised the true pathognomonic symptoms of it in them. This malady often exists in connexion with pericarditis, and from which we are not yet able to distinguish it. It is often confounded with pneumonia, and is sometimes accompanied by diseases of other viscera of the thorax. When carditis can be recognised in the living animal, the prognosis is always fatal; for the heart is charged with one of the most important functions, the execution of which cannot be effectually accomplished when there is any considerable disorganization. It would be superfluous to seek for the causes, the mode of termination, and the principles which ought to direct the treatment of a disease so rare, so little known, so little understood, and which has never yet been recognised during life. As to pericarditis, it is as little known among animals as carditis. We are aware that one or the other may, and frequently does, exist; but we cannot predicate the appearances which will present themselves after death."

M. Delalande then quotes the opinions of Collin, Desvilliers, and Corvisart. They all agree in the belief that it is impossible to distinguish carditis from pericarditis, or to say what is the nature or extent of the complication of these maladies, or which is usually the primitive disease. We (the Editor) pass over the imperfect history given by these gentlemen, and the sum of their inquiries and supposed discoveries, because the application of auscultation has enabled us, in many an instance, to detect the seat of the disease, and, in a certain number of cases, to be of good service to the patient. We are now engaged in inquiries of this nature, the result of which we will, at some future period, lay before our readers. We proceed to the cases which have come under this gentleman's observation.

I.—"I was sent for," says he, "on May the 20th, 1835, to see a milch cow, four months and a half gone with calf, and in high condition. The following were the symptoms exhibited:—the respiration precipitate, the expiration being cut short by a sudden convulsive contraction. There was occasional cough, painful, and very feeble—the pulse was small, wiry, unequal and irregular—no appetite—the skin very cold, dry, and adherent to the cellular substance beneath: occasionally she uttered plaintive lowings, which were evidently more acute when the hand was placed on the loins or the shoulders, or when she was forced to change her position. There were wavy contractions of the skin from before backwards, with a convulsive motion, as if she were ridding herself of the flies—the eye sometimes bright and sparkling, and presently afterwards having a mournful expression—

the horns and ears alternately hot and cold—the excrement covered with mucus—the abdomen slightly protruding on the left side—searching constantly on every side for a cold place on which to lay herself down when she was out of doors.

“The proprietor attributed all this to the straw, of which the animal had eaten a great quantity, although he confessed that he had often done the same with his other cattle without any ill consequence. I called to his recollection that we had bled this cow in the preceding year on account of some strange irritation that she seemed to labour under, and when she had fits of colic, and temporary diminution of the secretion of milk. In the months of June and August similar attacks were combatted with success by the same means. From that period there was no return of the disease until to-day, when nearly the same symptoms reappeared, assuming greater intensity, and lasting for a longer time. I told him that I suspected the existence of some organic affection, although I was unable to say positively in what part the mischief lay: therefore I confined myself to combatting the irritation and the slight degree of hoove.

“I administered a pound of olive oil, and every third hour afterwards a quart of infusion of linseed; the latter being also applied as an injection. She soon appeared to be a little more sensible to surrounding objects, and, after twenty-four hours, began to exhibit a desire to eat; and thus she continued until the 26th, when there was a sudden aggravation of the symptoms. I continued the same antiphlogistic means, in the hope that I might at length conquer the irritation produced in the anterior digestive organs by the presence, I imagined, of some indigestible matter, and suspecting also that there might be some organic disease.

“*Dec. 4th.*—She is better, and ruminates; but the irritation continues.

“*5th.*—Improving. She was let out into the yard with the other cows, and she appeared to be in good spirits, searching for something to eat, and skirmishing with another cow. A little while afterwards, however, she was evidently depressed, and an œdematous enlargement began to appear on the neck, which the farmer thought had been caused by the blow of a horn.

“*6th.*—After a careful examination I was convinced that this swelling was symptomatic, for it extended from the chest to the lower jaw. There was also a sudden and strange loss of flesh about the thorax.

“*7th.*—I deeply scarified these enlargements, and a great quantity of coloured serous fluid escaped. Pledgets of tow covered with salt were introduced into the incisions, and aromatic drinks administered.



"8th.—The tumefaction has nearly subsided.

"9th.—Considerable diarrhœa and general debility, so that she cannot stand. The pulse no longer to be felt. At night she died in the posture which for some time she had scarcely changed, the head lying on the extended fore-legs.

"Autopsy.—The cellular tissue of the trachelian surface of the neck was infiltrated, and the infiltration extended under the pectoral muscles. The abdomen contained nothing remarkable except the infiltration reaching to the sub-lumbar muscles.

"On opening the chest, we found that the pericardium had acquired an extraordinary size. I disengaged it by cutting the ligaments, or, rather, the *carno-ligamentous* adherences, by which it was attached to the surrounding parts. The whole of its exterior surface presented a strange irregularity. One part of it was of a lardaceous or fatty character—another was glandular—and another carcinomatous. On cutting through the membrane, three gallons of a brown serous fluid—exceedingly fetid, and resembling both in its colour and odour human excrement dissolved—escaped. Yellow, albuminous flocculi of the weight of three or four ounces were floating on this fluid. The inner surface of the membrane, which was of a pale yellow colour, exhibited no alteration except two little ecchymoses,—one about the middle, and the other at the bottom of it. The thickness of the pericardium, which varied from three to four lines, gave to the whole a weight of eight pounds.

"The Heart.—The whole surface of this viscus was very irregular, and covered by vegetations of different colours, black in some places, and in others yellow or brown. They were easily detached by means of a scalpel at certain points, but they formed very intimate adhesions with the depressed portions of this viscus. At the base of the left ventricle there existed a deep red spongy production, covered by a delicate membrane from which a multitude of small vessels proceeded. At certain places in the interior of this tissue portions of concrete matter,—in others, a multitude of small points in actual suppuration, and in others, granulæ, which had not yet assumed the lardaceous character.

"The heart, disengaged from all the accidental productions which covered its exterior, presented spots of different colours impressed more or less deeply in the tissue of the organ, according to their extent and position. They all formed a portion of a lardaceous tissue, into which the whole of the heart seemed to be changed, except at the point of the left ventricle, and the traces of which extended to the internal membrane of the heart. These spots, generally brown, were surrounded with black and green circular lines, and were faintly marked as they approached the centre, giving the idea of the singular clouding of some kinds



of marble. At the superior part of the heart these spots penetrated about half way through its tissue, while towards the inferior part it could be traced through every portion of the substance. They were less profound and extended, and of a less deep colour, in the right ventricle. The membrane which covered the heart on that side was about three lines in thickness, and infiltrated with a brown fluid; but all traces of this were completely lost in the left ventricle, which was altogether transformed into a lardaceous tissue. The auricles had acquired an unnatural size by the infiltration of their tissue."

CASE II. *May 20th, 1830.*—A mare, three years old, presented the following symptoms:—a general tremulous motion—quick and laborious respiration—small, hard, and accelerated pulse—cutaneous perspiration abundant and general—and a staggering walk.

M. Delalande had recourse to friction long continued, after which the horse was warmly clothed. Two setons were inserted in the chest.

*21st.*—The unfavourable symptoms have all disappeared. The setons have discharged profusely. Feed moderately, and occasionally give gruel.

*30th.*—She returned to her work.

*Sep. 15th.*—A return of the unfavourable symptoms, but under a milder form. Application of the same means, and with the same results.

Towards the end of November the proprietor removed her altogether from work, and sent her to grass, in order to get her into condition for the fair of Carême à Caen; and she would have been sold had it not been for a kick in the hock. Being again taken to work, she did well until the 31st of March in the following year, and then her illness returned with more than usual severity, and, after three days, notwithstanding all our care, she died.

On opening her, a considerable quantity of red serous fluid was found in the pericardium, and this was the only lesion that could be detected. The heart was unaffected, but the pericardium appeared to be somewhat thinned by the pressure of the fluid which it contained. She was in good condition, and her muscular power was undiminished.

CASE III. *20th. Sep. 1840.*—Intestinal colic appeared to attack a colt six months old, presenting the following symptoms: the breathing quick—the pulse small, wiry, and accelerated—the mucous membrane red—and a tremulous motion of the pectoral and scapular muscles.

Two pounds of blood were withdrawn—emollient injections administered. The symptoms diminished. A second bleeding

was effected, and every unfavourable symptom disappeared. Barley gruel sweetened with honey was ordered, and emollient injections.

21st.—The appetite returned, and he seemed to have quite recovered. He passed the winter in the stable, and, although somewhat thin, was in fair condition.

25th May, 1835.—He was sent to grass, and speedily got into condition. This continued until the month of September, when he fell off altogether as rapidly, which was attributed to the dryness of the season, and the little grass which the pasture afforded.

He was taken up on the 1st of October, and appeared gradually to recover his strength and spirits.

Nov. 1.—He was seized with a tremulous motion of several of the muscles—he heaved at the flanks—his head drooped—his pulse was very small, and much accelerated—the conjunctiva was red—the skin very cold—the submaxillary glands enlarged. Presuming that strangles were preparing, I gave him drinks of warm cider, sweetened with honey; plenty of friction was ordered; and a seton was inserted in the chest.

Nov. 2.—Every unpleasant symptom had nearly disappeared.

March 15, 1836.—There was a new attack of disease, with considerable itchiness of the skin, and eruption about the abdomen, with quickness of breathing. Two pounds of blood were abstracted. After this he rapidly increased in condition, and he was put to work. He discharged his task with readiness, and promised to be a valuable beast. On the 26th of April, however, after a hard day's work, yet from which he had not shrunk, and after a few gambols with his heels, to shew that he was neither tired nor hurt, he began to stagger—he refused his food; this peculiar tremulous motion spread all over him—his flanks heaved precipitately—his pulse became small, irregular, and intermittent, and, at length, imperceptible. He fell on his litter, and was dead in twelve hours.

Examination after death afforded nothing extraordinary, except a considerable effusion of red coloured fluid in the pericardium. Every other organ was in its natural state. After these observations, we may conclude:

1. That disease of the heart in quadrupeds is less rare than has been generally supposed, and that therefore it is the duty of practitioners to observe and to record every symptom that may indicate its existence.

2. That the attacks of carditis and pericarditis are sudden and irregular in their appearance, and in their intervals. That the attacks are more serious as the termination of the disease ap-

proaches, and yet without sufficient intensity, in every case, apparently to disorder the vital functions.

3. That during the intervals between the attacks, the animals usually get into good condition, and manifest much liveliness, and appetite, and readiness for work.

4. That the flesh of those which are destroyed for food does not betray any injurious disturbance of the circulation.

We also think that, as soon as possible after the appearance of the first symptoms in cattle, the patients should be prepared for the butcher, for, by such means, the occasional losses which the farmers experience on account of these strange diseases, would be much diminished. The actual character of the disease would also be better known: although we may not be able with certainty to recognise these maladies in the horse, yet we may, probably, prolong the existence of many suspected subjects, by the use of less succulent food, and by avoiding too laborious and exhausting work.

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POSTSCRIPT TO A LETTER FROM J. MACPHERSON ESQR.,  
ASSISTANT SURGEON TO THE ROYAL HORSE ARTILLERY.

March 8th, 1841.

FARCY and glanders have been very prevalent among the troop horses here for some years, usually attacking the animals in the rainy season. Besides tubercular deposits in the lungs, abscess, and softening of the ribs are often found after death. No case of glanders in the human subject has hitherto occurred here.

Dum Dum, near Calcutta.

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#### REMARKS ON MR. MORTON'S SPEECH.

THE letters that are received by the Veterinary Medical Association, and records of some of the speeches that are there delivered, are sometimes unavoidably detained at Mr. Morton's office until it is absolutely necessary to send them to the printer. It was so with Mr. Hayes' letter, and with Mr. Morton's speech, contained in the present number; and the Editor's account of the proceedings at the College during the last session, and his opinion with regard to *the system of exclusiveness* were printed three days before he had the slightest knowledge of the existence of these documents. For the truth of this he appeals to Mr. Morton.



Had he, as he ordinarily should have done, seen these documents before his *Leader* was written, he does not think that that paper would have been very different from what it now is. Mr. Morton has fully confirmed his account of the character of the session 1840-41, and its probable injurious influence on the mind of the student and the reputation of the profession. He has referred to the same prevailing opinion with regard to the baneful influence of Mr. Sewell's circular, and has, as every man must do, used language fully as strong as that adopted by the Editor of *THE VETERINARIAN*. He likewise, with the Editor of that journal, urges the members of the profession to continue their records of important cases, and to give their opinions freely, clothed, perhaps, in a little more guarded language—in that, for instance, which is adopted by writers on human medicine and surgery, or even more concise than it; but, he adds, and the Editor most reluctantly records it, that these measures not being adopted, “there is but one other plan, and that is, for the profession so to support its Journal by subscriptions and otherwise, that it may not get into other hands than those that are members of the profession,”—a plan totally impossible to be adopted—which would be the perfect laughing-stock of every Journalist and every one who wished to pilfer, and ruining, in the estimation of medical men, and of the whole of Europe, the character of our profession.

Again we entreat our old friends to favour us with their opinion, not with a view to the adoption of any course that would compromise the honour of our art in the slightest possible degree, but with the hope, or rather the certainty, of uniting us all once more in maintaining the high character of veterinary science.

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A LIST OF THOSE WHO HAVE OBTAINED THEIR DIPLOMAS  
FROM THE ROYAL VETERINARY COLLEGE.

*June 2d, 1841.*

- Mr. George Fisher, Bristol.
- Mr. J. H. Holland, London.
- Mr. Thomas Greaves, Manchester.
- Mr. Charles Williams, Buckland.

*June 16th.*

- Mr. Richard Whitwell, Shrewsbury.
- Mr. Joseph Brown, Navenby, Lincoln.
- Mr. Robert Pooley, Snettisham, Norfolk.
- Mr. J. S. Mayer, Newcastle, Stafford.
- Mr. J. Williamson, Dalkeith, N.B.

THE  
VETERINARIAN.

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VOL. XIV, No. 164.]

AUGUST 1841.

[New Series, No. 104.]

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A CASE OF ENLARGED THYMUS GLAND IN A  
HORSE.

*By Mr. JOSEPH SEWELL, V.S., London.*

*June 4th.*—I WAS called to attend a bay horse, with considerable anasarcaous swellings round the chest and shoulders, and extending along under the abdomen.

The history I had of the animal, who was one of good courage, was this: his owner had had him about four months, during which time he was kept in hard work and lately he had gone twice to Epsom Races and back. Subsequent to this, while working a job to Sevenoaks and back, he fell on the road, owing, as the coachman supposed, to megrims, but soon recovered, and went on to the end of his journey. A day or two after, his owner, not finding him so well as usual, and perceiving some swellings formed about him, took, as he informed me, a bucketful of blood from him. From this period I dated the debilitated action which took place, and which terminated in effusions to an enormous extent in front and round his chest, round the shoulders, down the fore legs, and under the abdomen. The animal up to this time had always fed heartily, but never carried much flesh. On my first seeing him his appetite was good; pulse 50, strong, and jerking at the heart; mouth in a healthy state. His appetite subsequently was alternately good and bad. A mild purge was first administered, which passed off favourably. This was followed by some mineral and vegetable tonics, combined, occasionally, with diuretic medicine, the effect of which, with repeated scarifications, had drained off and dispersed a considerable quantity of the aqueous deposit. But, after ten days, finding the general symptoms by no means alleviated, I apprised the owner that I considered some organic disease existed which rendered his recovery very doubtful, and that he had better determine not to go to much expense about him, as he was not a very valuable animal. The next morning he

saved us the trouble of putting an end to his sufferings, as he dropped suddenly, in consequence of some excitement, and died.

*Post-mortem appearances.*—A portion of yellow serous fluid was found in the abdomen. The stomach, spleen, and kidneys were perfectly healthy, but the lymphatic and mesenteric glands through the whole length of the intestines were enlarged, and apparently altered in texture. The stomach and intestines were full of well-assimilated food, in rather an unusual pulpy state. The chest contained a small quantity of fluid. The lungs presented a slight thickening in parts of their substance. The pericardium was partially filled with fluid; but the most remarkable appearance was that of the thymus gland, which occupied the whole of the chest anterior to the heart, and was strongly adherent to the pericardial sac and the pleura costalis on each side of the chest, and when taken out weighed twenty pounds. The glands at the bifurcation of the trachea were also much enlarged.

Query: Does the extensive disease of this gland, which doubtless had been long in existence, throw any light upon its connexion with the lymphatic system, which appeared more or less affected?

## GASTRO-ENTERITIC FEVER IN PIGS.

*By Mr. T. MAYER, Sen., Newcastle-under-Line.*

Dear Sir,—A BUTCHER, resident in this town, bought five small pigs from a neighbouring gentleman. After having them three weeks confined in a pig-sty where the air was foul, and keeping them upon impure wash and the offal of his slaughter-house, they began to droop, and lose their appetite. The bowels became constipated, the fæces being hard and scybalous; tremulous fits and spasmodic twitchings of the muscles came on in two of them—one of the worst having not less than thirty or forty fits in the twenty-four hours, accompanied with a champing and foaming of the mouth. At the period of attack they kept backing involuntarily, till they tumbled over backward. When moving forward, they reeled and staggered, unconscious where they were going, until they got their snouts fixed in a corner, where they would remain supporting and steadying themselves a short time.

One died the second day after we saw them; the other was pitched upon the dung-hill to be buried, the butcher conceiving it was dead. He sent them both up to our establishment to be opened; but my son found that there was slight animation left in one, from a slight twitching of his extremities, and the breathing being just perceptible. I name these circumstances for the be-



nefit of the junior practitioner and student, that they may never give up a case so long as there is the remotest chance of saving it. Many a time have I heard of cases from my father, and known them myself, where animals had been condemned to death as incurable. The parties not being satisfied with so laconic a decision and proceeding, have looked out for further assistance, and the patient has been restored to health, to the serious loss of professional character to the party who had arrived at so unfortunate and hasty a conclusion. Let them bear in mind, never to give up a case as long as there is life; for it is an old adage, but often a correct one, "as long as there is life there is hope." Leaving this digression, on opening the pig, which was really dead, we found much cerebral congestion, accounting for the loss of power over the motor muscles of the frame, and the disposition to go backward and tumble over. The thoracic and abdominal viscera were in an equally congested state; the mucous membrane of the stomach and bowels highly inflamed, and of a beautiful crimson hue.

*Treatment.*—We commenced by immersing them frequently throughout the day in warm baths, wiping them quite dry, and having plenty of dry litter about them. Calomel, rhubarb, and oleaginous purgatives were administered, to get the bowels regulated. In the worst case, the animal lay senseless, and incapable of either standing or walking, but convulsively twitching all over the body: clysters were repeatedly given, and fever powders combined with a diffusive stimulant and oleaginous purgatives administered several times throughout the day. In the other cases an antiphlogistic treatment was adopted, with the administration of oleaginous aperients, and occasional doses of calomel and rhubarb, as each case indicated its necessity. In about a fortnight from the attack there broke out an eruption all over the body, forming small, red, irregular elevated patches. They all recovered in three weeks; but the worst of them was some days before he could walk or stand, having a strong disposition to reel over or tumble backward. For the first fortnight they were obliged to be drenched with oatmeal porridge, the milk being thinned down with water. Their appetite returned very slowly; but although fresh water was regularly placed for them, they seldom touched it.

As these cases may interest my brother veterinarians who are practising amongst domesticated animals in general, kindly give them insertion in your valuable periodical, which will much oblige,

Dear Sir, your's truly.

EXCISION OF THE UTERUS FROM A SOW.—A  
CASE OF BLACK-WATER IN A COW.—AN OB-  
SCURE CASE OF INTERNAL EFFUSION.

*By Mr. L. BARKER, Stockley.*

THE following cases may not, perhaps, be deemed quite unworthy of a place in your excellent Journal. It has long occupied a niche in my little library. I, like others, have derived much information from it; and I should be ungrateful did I not express my sense of its value, and my determination to support it to the extent of my humble means.

In August 1840 my assistance was required with regard to a sow, my own property, and which was farrowing for the first time. She had produced during the night nine little ones; at 7 A.M. she took a regular breakfast of milk, and suckled her young ones, and at ten o'clock had some bran and warm water.

At 1 P.M. a total protrusion of the uterus was observed, and her labour-pains had returned, and continued, but with no great degree of violence. The uterus was necessarily very large. I did not for a moment conceive that it would be of any use to attempt to replace it, and I determined to pass a ligature round it, and excise it. J. S. Strother, Esq., a surgeon of this place, was present, and kindly lent me his assistance. We tied this ligature tightly, and cut the uterus away, leaving a small portion of it protruding: no blood followed the excision. Her young ones were taken from her, and she was kept as quiet as possible—indeed, she was indisposed to take any food.

At 6 P.M., however, she took a little gruel. Her young ones were taken back to her, two or three at a time, in order to keep up the secretion of milk.

We administered to her, as they seemed to be required, castor oil, spirit of nitrous ether, nitre, or antimonial powder, and she recovered.

No sooner, however, had she escaped from this danger, than she caught the prevailing epidemic. An almost similar treatment was continued, and her young ones kept totally from her two or three days, when she perfectly recovered and again suckled them. All of them in their turn exhibited symptoms of the same malady, but soon got well, without any treatment except a little nursing. At the usual period they were taken from her, and she was put up to feed. She fattened very kindly, and weighed sixteen stone, although of a very small breed.

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On the 21st of June 1841, I was consulted very early in the morning respecting a cow that had calved on the previous morning, a fortnight before the expected time. The parturition was not difficult, but she partially refused her food, looked dull and heavy, and had not cleansed. The owner therefore wished that she should have a cleansing drink, which was accordingly given, with an extra quantity of sulphur.

At 11 A.M. the pulse was full, and 100, accompanied by palpitation of the heart—the horns deathly cold—the ears of a more natural temperature—a very considerable degree of hide-bound, the skin clinging tight to the back—the eyes and muzzle tinged with yellow, and the little milk that was given being tinged with blood. Part of the cleansing had now appeared. I raised it, and a considerable quantity of black-water was evacuated. Indeed, this seems to have been her principal disease, and which the owner had carelessly neglected. A little oatmeal and water was drunk with avidity. A drink composed of aperient medicine, combined with some astringent and stimulating powders, was ordered, for the fæces were very thin, and voided with considerable force. The drink was repeated, no fæces in a favourable state having appeared.

On the 22d in the morning no fæces had passed of a favourable character. The palpitation of the heart was more clearly heard at a considerable distance—she frequently voided urine in great quantities. The medicine was repeated, with the addition of a tonic. Enemata of cold spring water were frequently applied, with some chloride of sodium. She has made no improvement, and frequently moans very loudly. At noon she was a little better, and had passed some fæces of a more satisfactory character. There was likewise a decided improvement in her urine. Her appetite was also returning. Suspend all medicines.

23d.—She is very weak, and hardly able to rise. Her dung, however, has more consistence, and her urine is clearer. Mingled aperients and tonics were administered.

24th.—She eats sufficiently to support herself—nevertheless, repeat the medicine.

25th.—Convalescent.

I decidedly coincide with Mr. Cott in opinion, that the disease is caused by feeding on some acrid herbs; and also, that red and black-water are generally confined to the months of July, August, and September.

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On the 21st of June, 1841, I was requested to see a cow, whose period of utero-gestation would expire on the following day. Being in very luxuriant pasture, the owner thought that



she was feeding herself too much, and, consequently, on the 12th of this month he had taken her into the house, and kept her there on grass, and also milked her twice in the day, with a view that she might not be too flush of milk at the period of parturition, and also not so likely to have milk fever. She had been apparently well from the time of conception. At seven o'clock this morning she had fallen. Not being far distant from my residence, I was presently there. Her neck was bent downwards and inwards, and her head swaying backwards and forwards; her countenance was indicative of great excitement and distress, and there was an entire suspension both of her milk and fæces. She was able to make a little use of her posterior extremities, but not the least of her anterior ones. There was a little preparation for parturition, but not sufficient yet to warrant the attempt to extract the fœtus. Her breathing was a little interrupted.

I abstained from taking blood, because, in similar circumstances, I had never known it productive of the slightest benefit. I gave her, however, some sulphur, with saline purgatives, and a small portion of carminative medicine, an enema, and half a pailful of chilled water.

2 P.M.—The breathing more laborious, and the rumen much distended with gas. We turned her over, and in doing this a great quantity of very fœtid gas escaped. The pulse was 80, and full. I now abstracted four quarts of blood, after which she seemed a little easier. I also stimulated the whole length of the spine. She will sometimes yield a cupful of milk. I left her under the care of an attendant.

7 A.M.—She is evidently getting worse. Her head is rested with the nose bent in under the thorax. Every now and then she will throw her head straight before her on the ground. We tried to make her swallow a little chilled water, but she has lost the power of deglutition, followed by a rattling in the trachea or larynx. It is now useless to force any thing upon her, for she would be immediately choaked: I, however, administered an injection with salts.

Finding that things were so desperate, I thought that it was time to endeavour to extract the calf. I endeavoured to introduce my hand, but a violent contraction of the vagina utterly prevented it. By the use, however, of opium and oil, I produced a relaxation of the parts, and found that the calf was alive, and in its natural state, and it was not long before I extracted it. I now endeavoured to give the cow a little carminative medicine, but in vain. Her respiration rapidly became more difficult. Presently we were enabled to extract a gallon of milk from her all at once. We let her remain quiet. Her pulse sunk to 40,

and became intermittent; and at six P.M. she died, without a struggle.

I was obliged to be elsewhere, and my assistant examined her. There was a considerable quantity of bloody fluid in the cavity of the abdomen. The liver was very pale and gritty, but all the other abdominal viscera were free from disease. There was a quantity of *green water* in the chest, and the left lung was in a very high state of congestion. The right lung was much enlarged, and covered with green patches. The heart was double its natural size, yet otherwise apparently sound. The pia mater covering the cerebrum was highly injected.

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## ON THE ABSORPTION OF CATARACTS.

*By Mr. CARTWRIGHT, Whitchurch.*

It affords me great pleasure to see that two medical gentlemen have favoured us with very interesting observations in your last number; and I hope the time is not far distant when there will be many others who will kindly lend us their assistance, and entertain the liberal views which are expressed at the conclusion of Mr. Cooper's remarks.

I am inclined to think that Mr. C. does not exactly understand the state of the case which I wished to illustrate by my quotation from Mr. Hey.

It is not "whether or not the opaque capsule of the crystalline lens is capable of being absorbed after the removal of the lens itself," as stated by him, for we never extract the lens—nor whether excised opaque portions, floating in the aqueous humour, are absorbed; but whether small cataracts, from the size of a coriander seed downwards, and which are supposed by veterinary surgeons to be capsular, are ever absorbed, and the capsule becomes transparent again.

Mr. Tyrrell says "they never do;" and you and Professor Owen agree with him. Now, in opposition to such an opinion we have the facts recorded by Messrs. Pott, Lucas, and Hey, some of whom had seen cases in which the patients had been blind for three months, twelve months, and even for so long a time as four years, before the opacity began to disappear. Mr. Abernethy says, "a capsular cataract I have nothing to say about; that seems to be a disease that may get well."

In our own profession we have Messrs. Clay, Harris, Percivall, and Spooner, of Southampton, and myself, who have seen similar cases.

For my own part, I see no reason why small opacities of the capsule may not occasionally become absorbed equally with every other part of the body. It is astonishing to what extent this takes place in the cornea.

If Mr. Cooper should favour us with any further remarks on the subject, I would beg leave to ask him, whether lenticular cataracts ever become absorbed in the human subject, leaving the eye transparent?

On reading over the case in your last number, sent by George Stowell, Esq., I was rather surprised to find it called one of vomition. Now, taking it as reported, I fancy that any veterinary surgeon would call it nothing more than an ordinary case of choaking; and I believe the probang never passed into the rumen.

The case mentioned as one of diseased kidney, also reported in the last number, by John Joce, Esq., of Swynbridge, one would almost fancy, from the symptoms and contents of the stomach, to have been one of rabies; but you, Mr. Editor, can give a better opinion than I can on this subject.

I could have wished the parts about the larynx had been examined, which, probably, would have settled the question.

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## ON THE EPIDEMIC IN CATTLE.

*By Mr. GEORGE FARROW, Ash, Durham.*

[This communication is inserted as giving an interesting account of the epidemic in this locality. At the commencement of the next year it is the intention of the Editor to give a condensed but faithful history of the general character of the disease, when justice shall be done to many a kind and faithful chronicler, to whose valuable communications we have not yet been enabled to pay sufficient attention.—Y.]

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THE length of time which has elapsed since I received your circular respecting the epidemic amongst cattle, &c., makes me almost ashamed to send a reply so late. I should most certainly have responded to your call much sooner, but I had nothing to add to the many highly interesting papers which you have received on the subject. I have been induced, however, to make a few brief replies to your queries, thinking they might be useful, merely as shewing the identity of the malady in the northern and southern counties.

1. It has not been confined to any particular locality or situation; but it has, either more or less, extended over the whole county.



2. I have not been able to trace any connexion between the disease and the soil and pasture on which the animals fed. The nature of the soil, and its productions, are so variable throughout the county, and the disease having appeared on every variety, I think they can have had nothing to do with its production.

3. In the beginning of November last, in some parts of the county, it had existed earlier than this by two or three months, but confined to a few farms where fresh cattle had been brought on, and those coming from the southern counties.

4. About the commencement of November, the air was cold and damp; and some considerable falls of rain took place. Since that period, we have had every variety of weather which the season usually produces.

5. On its first appearance, it was confined to cattle that had frequented the fairs or markets, or on farms where fresh cattle had been introduced.

6. In a drove of young Kyloes, which I had an opportunity of examining, it was supposed to have arisen from following some diseased cattle on the road.

7. In several instances it was evidently introduced in this way.

8. It is my decided opinion, that the disease is both infectious and contagious. Any person or thing employed about or being in contact with the diseased animals, capable of conveying the saliva or effluvium, will propagate it to a healthy one. There seems to be little predisposition required in the animal to take on the disease. Wherever it is accidentally introduced by a diseased animal, it spreads with such rapidity as scarcely to be believed. In the close and unventilated cow-house, the whole of the inmates are, one and all, affected in a few days. Many instances of this kind have come under my observation. I will here relate one:—

A farmer purchased a calf in the market, and, on his arriving home, in order to place the young animal in a warm and comfortable situation, he took it into the cow house, amongst his cows. Perceiving, however, that the young animal was unwell, it was quickly removed to another place, when it soon died. On the third day afterwards, the cow which stood next to where the calf was placed, took the disease. The adjoining one to her, three days afterwards, was affected; and in less than six days the whole in this house were affected with the complaint. The rest of the cattle on the farm were kept separated from these, and have escaped. A pig in the same yard broke from his confinement and got to the dung-hill, and ate some pieces of turnip which came from the diseased cattle. On the third day after, he was affected, while not one of the other pigs, which were confined, have had

the disease. I could select several other cases where it was thus simply introduced, and spread through the whole herd. I need not add more on this subject, as all who have seen any thing of the complaint must be convinced of its highly infectious and contagious qualities.

9. There is some variation in the early symptoms. When the animals are in the open folds or fields, they make to the most sheltered situations: this is more observable if the weather is cold. The appetite continues, but it is not with the relish of a beast in health. The coat is rough, the legs are brought together, and the back is slightly elevated. In a few hours after these symptoms shew themselves there is a slight increase of saliva; it drops from and hangs around the under jaw. The animals are often making forcible attempts to swallow. In this stage they are generally standing, the legs are often lifted, and there is a degree of stiffness about the limbs. These early symptoms are not always observed when the animal is in the house. I have often, however, seen them well marked, and followed by considerable rigors before there was any effusion into the mouth, or the feet became affected. At the beginning, and throughout the course of the disease, they are much affected with cold; trembling and shaking with the least exposure. In a great many cases not one of these early symptoms is seen; but the animal refuses its food, saliva drivels from the mouth, or the feet become affected. More frequently the feet and mouth are diseased at the same time. There is one symptom which is never wanting, but is frequently overlooked,—an itching of the skin; the animal is rubbing and licking incessantly: this is on the day prior to the attack. Where I have had an opportunity of examining the pulse during the cold fit, I have generally found it from 60 to 70, and scarcely perceptible at the jaw; it gradually increased in strength as the warmth returned. In many cases there is no perceptible alteration in the pulse, either at the commencement or during the course of the disease.

10. After the early symptoms shew themselves the future progress varies considerably. In some the appetite and general health seem little affected, and the disease is thrown off in a few days: in others, on the contrary, and particularly in fat cattle and milch cows in high condition, the appetite is quite gone. There is great local pain, attended with general fever.

11. The treatment which I have adopted has been much the same as that which has been generally pursued. In every case I purged the animal. The sp. ether. nit. was early employed. Plenty of linseed-tea or water-gruel was given with the horn, in order to accelerate the action of the purgative. With respect to

bleeding, I have not had recourse to it, except in those cases in which the symptomatic fever ran high from the inflamed state of the feet. Here it was of great benefit, generally relieving the animal in a few hours. In severe foot cases the heels were scarified, well fomented, or placed in a painful of warm water: this gave considerable relief. After this astringent mixtures were employed; the mouth was frequently washed with a sol. chlo. cal.; and to this followed a cooling astringent mixture. This was used with good effect. The udder of the milking cow required particular attention, for it was when she began to amend that the udder became diseased. When the healing process had commenced, the gland would suddenly inflame, with all the appearance of common garget. I immediately repeated the purge, fomented with warm water, and applied the lead lotion made warm; these means frequently removed the inflammation in twenty-four hours. When the teats had lost the whole of their cuticle, I found nothing more healing than the ung. hyd. nit., weakened with three-fourths of lard, or any mild ointment.

12. From six to ten days.

13. The number of patients to which I gave medicine exceeded two hundred, and all perfectly recovered.

14. The number of diseased animals in my neighbourhood, although considerable, is trivial in comparison with those which have escaped. I should say, making a rough calculation, that not one farm in twenty has been visited with the complaint. A great many farmers have treated the disease themselves—many of *these patients* have been lost, others have been lame for a length of time, and have lost a great deal of condition. Many of the milking cows have lost their udders. The produce of several cows have died as soon as born. I attribute this to want of proper management during the disease. I am warranted in attributing it to this cause, from not having had any casualty of this kind attending those which have come under my own care.

15. None whatever, unless the gland became inflamed, when the usual changes which take place in common garget were observed in this disease.

16. Fat cattle, and milking cows in high condition, have had the disease most severely; young stock in moderate condition have been slightly affected.

17. No.

18. When the disease was properly treated and the animals well managed, during the first stages, they soon recovered their condition and healthy appearance; but when the hoofs were cast, or the udders suppurated, it was some weeks before they regained their thriving state.



19. I have not seen it a second time in the same animal.

For several weeks the disease subsided, and it might almost have been said that it had disappeared; but within the last two or three weeks it has been gradually spreading over the country again. As it was in autumn, so it is now, attacking those cattle first which had been at any market or fair. So convinced are the farmers in general that the disease is principally contracted at these places, that many have refused to purchase any cattle from the market. In almost every instance, the breaking out of the disease amongst the cattle on a farm can be traced clearly to infection. They have been either in contact with strange stock, or fresh cattle have been brought on the farm. A number of Irish and Scotch cattle is brought into this county twice in the year; in the autumn for the straw-yards, and in the spring for grazing purposes. These cattle arrive in large droves, and are sold to a great many farmers in small lots. The disease generally exists in these droves, and they are frequently obliged to rest for some time; but those which have escaped, and also those which have recently recovered, are taken to the different markets, and sold. The purchaser, being quite ignorant as to their having had the disease so recently, takes no precaution; and the consequence is, that the infection is propagated to the rest of his stock. These droves have caused the disease to spread, more than all other causes put together.

Your's, respectfully.

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## A CASE OF CARDITIS.

*By Mr. S. WHEATLEY, V.S., Staindrop.*

Sir,—I WAS called on to attend a pony, suddenly taken ill on the 2d instant. The case being probably unusual, I make free to forward the following account of it.

He was a handsome pony, upwards of sixteen years of age, and very fat; in height about thirteen hands and a half, and the property of the Duchess of Cleveland. Her Grace's coachman had given physic to this pony, as well as to the others, three days previously, and it had operated tolerably well. On my reaching the stable on the 2d inst. the pony's heart was beating loud and quick, audible at some distance, and presenting, from whatever cause it arose, an evident case of carditis to a frightful degree.

The coachman had, as soon as he saw the pony ill, taken away about three quarts of blood. The violent action of the heart induced me to open the neck vein; but before I had subtracted

three pints, the pony fainted. The sight was now most distressing;—the profuse sweating, staggering, and the heaving of the flanks, the heart's quick and forcible action, and the peculiar retchings of the body, were past describing. I must leave you to imagine its state, for I cannot picture to you any thing like its sufferings under, as I presume, its fainting condition. During this struggling the bowels acted, a free purge (I fancy not an intended evacuation, but in consequence of the retching) took place. After this there appeared to be a twitching of the bowels, for the posture and paddling of the animal gave an impression that there was evidently irritation or griping pains in the bowels.

I at once gave the proper sedative medicine in some gruel, and also injections. The fainting state lasted full half an hour, and we were obliged to hold the animal up. The heart continued beating upwards of 100 pulsations in a minute. The legs were clothed and bandaged, and free air admitted into the stable.

3d, A.M.—The pony had taken during the afternoon and night four doses of the sedative medicine. The same medicine was ordered to be continued. No alteration in the action of the heart (110 per minute), and it can still be heard before we enter the stable. The nostrils are wider than in their natural state, and the breathing short and quick. The patient gets very anxious not to be left, and follows us round the loose box. A blister was now applied to the sides of the chest, which acted well. At night the patient took a little water, but there was no other symptom of amendment, and my prognosis was still a fatal one.

4th, A.M.—Strange alteration. We cannot hear the heart as before, but it is distinct to the feeling (112 per minute). He has drunk a little gruel and eaten a little grass. The nostrils dilated. At times the pony neighed, as though after his attendants or fellow ponies. All that saw him imagined him better to-day. The medicine was continued. We tried to take away a little blood, but the stream was slow, and in small quantity. The blister has acted uncommonly well.

P.M.—The pony has laid down twice, yet no other improvement.

5th.—The pulsation of the heart scarcely to be felt by applying the ear. When detected, the pulsations are feeble and quick (from 110 to 120 per minute), with breathing accelerated;—he occasionally lies down, but is uneasy when down. He died this morning.

On opening the chest, the lungs were found to be discoloured: but there was not any particular disease about them. No fluid thrown out by the pleura of the lungs or ribs; but the course of the aorta was seen spotted with inflammation in the thorax.

On exposing the heart, we found that the pericardiac sac was quite filled with fluid, gorged almost to bursting, and a surprising quantity escaped when it was cut into. I am sorry it was not collected, so I will not guess at the quantity the sac contained, but it was very great. The heart had lost its colour; it was quite pale and very soft, clear of abrasion and separation of the fibres towards the apex. The blood in the heart was ropy, and adhering to the valves. In the left ventricle there was one dark streak of inflammation, with here and there a black spot. The softness of the heart, its wasting away, if I might so term it, and the dropsy attendant, are the considerations in this case that were most impressed on me.

I have, I know, but indifferently reported this disease, yet the main facts are truly stated. You will select such as you think worthy of the veterinary journal. Every fatal case ought to receive its proper examination, and any information offered thereon by practitioners I know will be thankfully received when rightly and freely conveyed.

There are one or two features in this case to which I would wish to call your attention: first, ought I to have tried bleeding again, without regard to a second fainting? At the first seeing this pony, I entertained no hope of recovery; but it was my duty to do what I could. I really fancied the patient was dying when it fainted and fetched its breath so violently. Is it not very remarkable that the pony should live so long, its heart probably never beating less than 100 pulsations per minute? Was my giving sedative medicine objectionable?—if so, in what way could I treat the pain in the bowels? for I am certain there was much uneasiness felt there.

I see I have omitted to state that the pony had another free purgation on the first day. This pony was never observed to ail any thing whatever until the moment of its entering the stable after walking exercise. It was, like many old ponies, delicately nice about taking water or soft food during medicine, and had under this physic eaten very little indeed. How are we to account for this sudden irritability of the heart? The pony had previously been a remarkably healthy one—it undoubtedly was very fat. I remember, when I was residing with you, a grey horse surviving an attack of carditis under your treatment. It was the powerful bleeding you practised which subdued the inflammation.

I do not clearly see that the physic had much to do in this case; if so, please to hint that it had not. The other ponies took no harm. The sedative medicine was given in small quantities about every three hours during the two first days, with no intermission in the heart's action, that is, when I saw him; and I did so three or



four times each day. The pony staled occasionally, and I think I have seen digitalis act on the kidneys.

Cases of inflamed laminæ are scanty in the pages of THE VETERINARIAN. I have attended a colt, unbroke, unshod, never on the road, affected with this acute founder: the soles of both feet have sunk down, and are now separating round the coronets, and he is likely to have fresh hoofs—he was in no way ill beside this; but this was quite enough. A horse in stables close by him had the influenza. With regard to the last number of your Journal, I beg to say that I am no advocate for any *exclusive* work. THE VETERINARIAN has done much good, and probably harm, by informing the public of the unfitness of the many young gentlemen to treat cattle, notwithstanding the assurance with which they enter the field. They find this out in due time, and we often smile at what we read. Better days, however, are at hand.

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## LACERATION OF THE TONGUE IN A MARE.

*By Mr. JOSEPH OSBORNE, Pupil to Mr. Cope, Ashborne.*

ON Friday, June 12th, I was desired to look at a mare with her tongue cut very badly; in fact, very nearly off close to the frænum.

The young man that brought her told me he had put the halter in her mouth, and tied her to a gate, and he supposed she was frightened, and ran back, which caused the tongue to be lacerated. I immediately bled her freely, administered a strong aperient ball, and applied the proper balsam to the tongue. As she could not eat, I ordered her as much gruel as she would drink, and sent an astringent lotion with which the tongue was to be dressed twice a-day.

14th.—The wound appeared healthy, and she was constantly trying to eat. Dress as before, and keep on with the gruel.

16th.—She appeared a great deal better. The mixture and dressing as before.

19th.—She could eat a little grass. The wound is fast closing.

25th.—The mare appears to eat almost as well as ever. The wound was healed, and she was dismissed.

These cases may be common with you, but I have not seen one of the sort reported in your valuable Journal.

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## THE VETERINARIAN, AUGUST 1, 1841.

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*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

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IN the last Number of THE VETERINARIAN, the author entreated the readers and patrons of that work to favour him with their opinion as to the measures which should be adopted in order to unite us once more in friendship with each other, and a determination to maintain the character of the profession to which we belong. We, likewise, have personally applied to a few members on whose judgment we should place implicit confidence.

A portion of the present Number shall be devoted to the consideration of the answers that we have received, accompanied by the name of the writer, where the privilege of disclosing it has been granted.

It will be hard if we are not enabled to comprehend more satisfactorily our relative situation, and advantages, and duty.

We begin with the non-contents.

First on the list is a gentleman with whose communications we used once to be favoured, and for whom we have still much cordial esteem, although we are sure that he is wrong.

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I certainly agree with many others in thinking that the plain and straightforward way in which various diseases are spoken of in THE VETERINARIAN is a great injury to country practitioners; for instead of many people sending for a veterinary surgeon, they take in this and other works, and treat the cases themselves. I am a great friend to the profession, and I should feel a pleasure in doing any thing that is in my power to oblige you, but I do not think that I should be justified, if I had made any wonderful cure, in having it published; as, for instance, in this place, there are several farriers and grooms to encounter, and, if they knew how I treated the different diseases, I should not be sent for so often as I now am. When first I commenced business, I was candid, and did not regard telling different things; but this I was obliged to give up, for I found that if I had not done so, I could not possibly have got a living in this neighbourhood: indeed, I was told by several of my friends that I was much too candid, and this is the reason for my being so long silent.

I am, dear Sir,

Your sincere friend and well-wisher.

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The name of the next in order we are indeed glad that we are permitted to give. It is that of *Mr. J. HAYES, of Rochdale.*

*To the Editor of "The Veterinarian."*

My dear Sir,—I respectfully address to you some remarks on evils which I and others complain of; that is, the publication of communications and circulars, which are sent through the country, and also veterinary works, written in such plain, easy, and familiar terms.

I think, Sir, with Mr. Morton, that such modes of procedure are, indeed, little less than professional suicide. It may be said, that these free, plain, and open-as-day publications, raise the profession and its members in the estimation of scientific men; but I know of my own knowledge, that, although they may have a better opinion of our art, yet these publications falling into his hands, even the scientific man's hands, if his horse or his cow should become unwell, he immediately flies to his library, takes out the veterinary work or circular, (the best in the world!) looks over the symptoms of diseases, and when he finds some resembling those appearances which he fancies he sees in his sick animal, he then applies the remedial means that are there set forth.

Perhaps he may stumble upon one which answers his present purpose, or nature may be sufficiently strong and powerful to accomplish her own work, and, in spite of the obstacles which her owner is throwing in her way, may reinstate herself.

If this case is successful, it emboldens him; and the next time he has an animal amiss he sets about a cure with confidence; and should he not be successful this time also, he does not attribute its failure to any want of skill in himself, or the improper nature or the insufficiency of the medicine, or the means he has employed. He cured before, or he thinks he did, and this is enough for him; he therefore consoles himself by saying, "that they must die sometimes, and that it would have died whoever he had employed; or else," says he, "these great doctors would never die." Though the medicine which he employs costs him double what would have been the charge of a veterinarian, yet he is satisfied, and feels a kind of pride that he has done and can do without the vet.; and although he thus loses his animals by his own ignorance and stupidity, yet if his friend or neighbour's beast should become ill, he will go and advise him either to pursue the course which he has done, or let him cure the animal for him. Thus the system goes on, and, perhaps, many little things may and do yield and become right.

Here is a great loss to the veterinary surgeon, whose province it is to have the attendance on these little things as well as the



other more difficult cases ; for these little cases are the most profitable part of professional practice. The cure of these slight cases is, in general, attended with more satisfaction, leads to more practice, and yields more profit to the veterinarian in the long run. But should a professional man be called in at the last hour, when every hope or chance of restoration is for ever fled, the veterinarian, not being able to repair the breaches which delay and bad treatment have made in the part or parts afflicted, incurs no little blame. If any one should remark to the owner the folly of such proceeding, he will immediately have his answer ready, and say, " Oh, I got such a veterinarian to the animal, but he could do him no good (the animal being drawing its last breath when the veterinarian was sent for): the horse or cow just did as my book or such a person said he would do."

This system, Sir, was never more exemplified than during the late epidemic. I am sure that in this district the farmer or his men have, on an average, treated ten cows where the veterinarian has one.

Now, I wish to know how the veterinary surgeon is to *live*, and how he is to keep up that station in society, or the honour and high character either of himself or his profession, under such opposing and powerful difficulties ; and if these things are to remain and are to go on, what favourable prospects can the young practitioner, whose nest is not yet feathered, or the young aspirant for a diploma or other veterinary honours—I say, what cheering prospects can they see in the prospective before them ; and especially when they behold the Veterinary Colleges passing and manufacturing young veterinarians at the rate they do.

Now, Sir, it appears to me strange that persons holding such liberal views, views which will not permit them to belong to any exclusive society, not even when the existence of that society depends on its exclusiveness—that these very persons are found to be the great advocates of this very principle, which they shew by their strenuous exertions to obtain a charter, and this very charter, it must be admitted, being based on the very same exclusive principle. It was this honourable feeling, united with other reasons, which would not permit me to join in the call for that measure ; for my opinion is, that the more a person or a principle is *held up by the strong arm of the law*, or by power and *force*, the less is that person or that principle esteemed. Feeling so strongly the influence of this opinion, I could not add my name to the list of those gentlemen, nor join with them in the cry for a charter.

I again state, that I think the present modes of disseminating veterinary science are calculated to almost, if not quite, ruin the

practice of the country veterinarian ; and also allow me to say, I allude more especially to those communications to agricultural bodies, &c. in such plain terms, and familiar manner dictated, which has been made by the Professor himself, and also by other individual practitioners.

The agricultural societies also glean from the pages of *THE VETERINARIAN* every thing they think will be of use to the members of their body. They are printed in the form of circulars, with instructions for their use and application : the effect of this is much felt by the country practitioner, who, perhaps, has been the communicator or discoverer thereof. Now, Sir, I do contend, that there can be no use either in a profession, or in the honour or character thereof, as far as regards its members, if it will not allow its votaries by an honourable practice and honest conduct to live thereby.

I must however say, with Mr. Morton, that it is easier to find fault with a thing than to devise means to remedy the faults we complain of ; yet I would propose that we act according to the first plan of Mr. Morton and yourself,—that is, let us continue to record and contribute our important cases, but clothed in more guarded language, and in such as will be only understood by the educated and scientific man ; and this more particularly as respects the detail of symptoms, doses, &c. We may be more free with the detail of operations. And with regard to the records and the reports of the Association, I would suggest that they be printed, published, and circulated among the members only, for they are our own property solely. In my opinion, the judicious arrangement and settlement of these questions is of much more importance to country practitioners than all the charters in the world. I am, Sir, indeed sorry to be compelled to come to these conclusions, which the circumstances before adverted to force upon me, and much I regret the necessity thereof ; for I should rather that things could have gone on as they were going, and the records of the Association and the contributions to *THE VETERINARIAN* been as free as air, but for reasons which are manifest to our view, and which speak with tongues of fire too plain to be listened to with indifference. We must be determined, however, not to let that noble and high-standing Journal *THE VETERINARIAN*, sink from its pre-eminence for want of our united or constant assistance ; for it has pursued a course most noble and highly honourable, both to the profession and to its talented and generous Editor. It is worthy of that cause to which it has always been devoted.

These, Sir, are my opinions, and stated, as you desired me to do, “ candidly and freely,” and I hope not offensively ; for I

seek only to promote the true interests and welfare of the whole profession, and have no desire but to unite the whole in one common bond of peace and unity. I will not enter into any angry or unkind controversy with any one, but humbly lay my opinions before my brethren, and, let them judge of them as they may, I will still continue to feel and to express sentiments of kindness towards them. With an anxious desire to promote the welfare of the whole of my brethren, I beg leave to subscribe myself, Sir,

Your ever devoted friend and servant,

J. HAYES.

P.S.—I will still continue both to think of and to lend all the assistance that my small abilities will allow me to *THE VETERINARIAN*. It must and shall be kept up and supported. If you think the remarks which have occupied the former part of this paper worthy, you are at liberty to publish the *whole* in your next: I shall be glad to see them there, and the opinions of others also on this vital subject.

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To the next letter also we are permitted to append the name of the author. It is *Mr. THOS. PROCTOR, of Solihull*.

My dear Sir,—I received your letter of the 8th July. I find you anxious to obtain the advice of a few of your old friends (amongst whom you have been pleased to give me a place) respecting *THE VETERINARIAN*. I can assure you, humble as I am, I ever have been a friend of you and *THE VETERINARIAN*, in proof of which more than thirteen volumes of that periodical are now lying at my side; and, as I have said before, I value them, and I value the name of *Youatt*—the name of him who has done such a vast service to his profession and his brethren.

I certainly feel myself, sir, inadequate to offer you any very valuable advice respecting our monthly periodical, although long aware of the dissatisfaction you are now alive to concerning it. If I must say a word or two, I shall be plain, yet respectful.

In my opinion, a great deal of harm has been done to us as practitioners from the manner in which practical cases are published in our Journal, the authors entering too much into the minutiae respecting symptoms, causes, doses, and effects. The man who writes thus I am convinced, but not until lately, materially injures his profession. I and some of my acquaintance have felt the truth of this. See the eagerness of the farmer, cow-leech, groom, and shepherd, to catch at any thing that is in plain English, as it is called. Our Journal now finds its way among many



of these persons, and if it does not, the *Farmer's Magazine* most assuredly does, which extracts so much from it.

We cannot calculate the extent of injury the printed reports of the late epizootic have done to the veterinary community. Look at the one sent forth by Professor Sewell ; and think of the harm it has done to practitioners. If the Professor could have foreseen the result of his circular, surely he would have been more guarded. Latterly other practitioners, either not seeing or feeling the effect of this, have acted very similarly, by sending very lengthy accounts of the epidemic among horses for insertion in *THE VETERINARIAN* ; and the generality of them, after minutely stating the symptoms, treatment, &c. wind up their papers by saying—as some did, that out of so many,—two or three hundred—they only lost one or two patients, and some none at all ; giving the distemper they spoke of a very light appearance to the public. All this has gone forth by means of the reports of the Royal Agricultural Society, *THE VETERINARIAN*, and even the daily papers, and has found its way to most of our employers. How, then, has it come home to the poor veterinarian ? Why, the farmer who has twenty or twenty-five cows ill of the epidemic, instead of employing him, meets the practitioner with the Professor's circular in his hand, and says, “ I need not your help ; I can cure my cows myself.” Another agriculturist, with his team of horses affected with the influenza or distemper, says, from reading these accounts, “ I understand that this complaint is not at all fatal,” and therefore at once makes himself easy about the matter ; and often either doctors them himself, or else lets them get well of their own accord. Now this is no surmise, no exaggeration, but a matter of fact, and what I have repeatedly experienced from many of my own employers, in consequence, I say, of these printed circulars and papers.

As accounts of the epidemics have got into so many channels, the probability is, that the next time a similar distemper breaks out, farmers and owners of cattle will make reference to them, and act as they have done now, to the injury of the veterinary surgeon. From what I have said, you will at once perceive we have suffered now, and we or our successors may hereafter. No wonder, then, “ that practitioners view with alarm and indignation the public circulation of Professor Sewell's papers,” and, I also add, the unnecessarily spun out papers on the epidemic among horses which have appeared in our own monthly *Journal*.

Thus, Sir, you will see some just cause why many practitioners do not cordially support *THE VETERINARIAN*. I have heard several very respectable men say, that if things are to go on as they have done, the practitioner will be ruined. We well

know many people who will not tamper with their own health and lives, rather delight to act otherwise with their cattle; for they think, after reading these accounts, they are capable of curing every malady.

Although our interests have materially suffered already from the thoughtless, as I may call it, procedure of a few of our brethren, I still hope for better times in having these evils counteracted; and if I am to make a humble attempt to propose any thing to set all right again, it would be to the following effect:—

1st. That, for the future, all papers sent for insertion in *THE VETERINARIAN*, containing cases of practice, should be concise in the symptoms, treatment, effects, medicines, &c., and if medicines are particularly stated, with the doses, it should be in Latin, like the medical journals. Any correspondent neglecting to do this, the Editor ought to be at liberty to alter it.

2dly. When any epidemic is raging among horses and cattle, correspondents sending papers respecting it for insertion in *THE VETERINARIAN* should be very guarded respecting their remarks as to its nature, treatment, &c. If at such particular times the Editor requested the opinions and experience of practitioners, and that assistance was rendered, he might devote a few pages of his Journal to such an important topic, gathered from these resources, and worded in a way that would be sufficient and instructive to his general readers; or, at some after-time, he might give such papers, blended with his own individual experience, to the public in the form of a small book on the prevailing disease, whatever it might be.

As for the records of the Association being blended with the old *VETERINARIAN*, I have not at present much to say; although, were I to say any thing upon that subject, it would be to the effect, that they should be made a separate volume.

I believe that if these little alterations could be made in *THE VETERINARIAN*, it would regain its popularity among practitioners, as I am persuaded it is from these causes that many view it with suspicion and dislike; and well they may, when it in many respects tends to their loss, in depriving them of numberless patients, as has been the case of late. Practitioners who were in business before those printed circulars were issued find a great difference. Where before he met with no interference, he is now continually annoyed. I say, dear Sir, in conclusion, make a little alteration in your Journal, and then your old, and many new friends, will rally round you and yours.

I have the honour to remain, your's, very obediently,

THOS. PROCTOR.



P.S.—This plain, though sincere advice to you—and when I say *advice*, I perhaps should think myself indeed presuming—is presented, believe me, from the best of motives. I know my own mind and the minds of many other practitioners upon this subject, which at setting out I promised to be plain upon, yet respectful.

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To the fourth letter we venture to affix the signature. It is from our respected friend, *Mr. J. TOMBS, of Pershore.*

Dear Sir,—As there appears to be a controversy among the members of the veterinary profession regarding *THE VETERINARIAN* and the Association, and as you and Mr. Morton call upon the profession to give opinions thereon, I am induced to give my individual opinion respecting the same.

First, as regards *THE VETERINARIAN*. Its high character must be maintained, by publishing it to the whole world, the same as other publications: but certainly the method of inserting cases may be beneficially altered, so as not to put the empiric in possession of knowledge arduously and dearly acquired by some of us. I think we should not enter into long details respecting the symptoms and treatment of diseases: we should be extremely guarded in describing our modes of treatment, merely stating that the disease was subdued by the exhibition of laxatives, febrifuges, or external applications, or as the case may be. We should never mention the exact quantities of drugs given. I can bear testimony to the injurious tendency Mr. Sewell's circulars have had as it regards the country practitioner. I hope and trust no more of the sort will emanate from him, especially as they likewise prove injurious to the farmer, by sacrificing his property to those infallible recipes; and, lastly, it stirs up a spirit of quackery, which has for some time been dormant.

Secondly, as to the Association, I think the Proceedings ought to have an exclusive circulation among its own members. The debates are the property of the members. All the subjects introduced for discussion should be freely debated upon, the general symptoms should be described, and the minutiae of treatment recorded; therefore in justice to the individual members of it, the debates should not be published, but printed quarterly, and forwarded to every member only; and if the funds of the Association are too low to defray the expenses of printing, &c., a collection from the members should be resorted to, to compensate for the same.

I remain, dear Sir, your's respectfully,  
J. TOMBS.

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To the next letter we are permitted to affix the proper signature. It is the production of one who has done the cause of veterinary science much service, and whom all his brethren respect—*Mr. W. C. SPOONER, of Southampton.*

My dear Sir,—In the leading article of your last Number you have mooted a subject of much importance to the profession, and on the proper understanding and discussion of that subject the interests of the members of our profession are intimately mixed up. I refer particularly to that part in which you state that “a certain number of practitioners are averse to the diffusion of veterinary knowledge beyond the circle of the profession.” I have no time to go into this subject as it deserves, but must content myself with embodying my own opinion in a few hasty remarks.

The question, as to how far our profession is benefitted or injured by the publication of veterinary knowledge, is one of much difficulty. There are few advantages without some drawbacks—few benefits without a bane: but my own impression is, that the advantage of such publication vastly preponderates over the disadvantages. At the same time I am free to acknowledge, that the profession has been greatly injured by many popular veterinary works, some consisting of little more than recipes, the effects of which are, to render the horse-owner self-opinionated, and to make him fancy that he knows as much of the disease of horses as the veterinary surgeon himself. Works, therefore, that treat of disease in a superficial manner, making it appear altogether as a very simple and easy affair, have been, and still are, of much injury to the profession.

It must, however, be borne in mind, that these popular works have been years before the public—that nothing we can do will prevent their sale, though possibly some of us may be able to render them not only much less injurious but even in some measure beneficial to the profession. But, putting these works out of the question, let us take, for example, those of Blaine and Percivall alone,—the value of which will, I think, scarcely be disputed by any one. For my own part, I must candidly confess, that I have derived, in times gone by, far more valuable knowledge from them than from all the lectures and demonstrations I have ever heard at the College. The case, I am aware, is very different now: for the talents, the knowledge, and the zeal of the professor of anatomy cannot be too highly appreciated: but in my time demonstration was a farce, and I could not have got on at all without the aid of the authors before-mentioned.

Now, the sale of these works—particularly Blaine's—has not been confined to the profession : if it were so, the first edition would scarcely have been sold off by this time, and the author would have been deprived of the emolument and the profession of the advantage of new and improved editions. We, therefore, are benefitted rather than otherwise by the public purchasing the works in question.

Now then, with regard to *THE VETERINARIAN*, my own conviction is, that the advantages rendered by this work to the profession infinitely counterbalance any injury it may have done. It is not and never can be a *popular* work—its price, and its freedom from amusing matters, will always prevent this. No one can study the diseases of animals from its pages without the sacrifice of considerable time and mental employment, as well as expense ; and this protection I should ever be contented to regard as a safe and effectual shield for our interests.

Let us place in contrast to this the conduct of the Agricultural Association, a body from which so much was expected and so little has yet been obtained. Their subscription is 20s. per annum, for which, besides other advantages, they furnish their members with a quarterly journal of Transactions ; and, not content with this, no sooner does an epizootic disease appear, than they heedlessly send to all and to each of their members an empirical account of the treatment of this disease, which, to have preserved its character, should have been designated “Every Man his own Cattle Doctor, or, a New Way to do without Veterinary Surgeons.” I designate the account as empirical, without the slightest disrespect to its author, whom no one, I am sure, can more highly esteem as a friend of our profession and its practitioners than myself ; but I style it empirical—although I believe that, altogether, it was as rational a mode of treatment as could, under the circumstances, have been advised—because it is the opinion of one individual with, necessarily, a very limited experience of the matter, advising a certain plan of treatment for a disease which has appeared in various forms, some attended with much danger, and others comparatively slight and dangerless. It also necessarily becomes empirical in the hands of those who are ignorant of the properties of medicine and the symptoms of disease. A Society formed under such favourable auspices for the promotion of the interests of agriculturists should not thus have sacrificed the present for the future ; they should not, by publishing this clap-trap, have retarded the progress of sound scientific knowledge of the diseases of cattle ; they should not have killed the goose for the sake of the golden egg. If, instead of this, they had, as they easily could have done, and with little



cost, obtained the opinion and experience of, we will say, half a dozen veterinary surgeons most experienced in cattle pathology—if they had divided the knowledge thus obtained into two branches—one containing the nature, early symptoms, and general treatment of the disease, with the advice to place their cattle under the care of a neighbouring veterinary surgeon of education and character—and the other the best medical treatment to be adopted in the various stages of the disease—if they had done this, they would have conferred a benefit on our profession, in return for which we should gladly have become members of their Association. They would have greatly accelerated the knowledge of cattle diseases, and saved the lives, and quickly restored to health, thousands of cattle, and thereby essentially benefitted the pockets of their members, promoted the objects for which they were formed, and raised themselves in public estimation.

As it is, however, the error *has* been committed. I hope that it will be the last, and that it will be atoned for by corresponding benefits.

THE VETERINARIAN, from the hour of its birth to the present time, has never exposed itself to charges such as these. That its conduct has always been free from blame I do not for a moment imagine—many a time I would gladly have erased a portion of its contents. To expect otherwise, however, is to anticipate too much from frail humanity.

If, however, its conduct has not always been free from censure, it has achieved a vast amount of good—it has collected together a mass of sound scientific knowledge, and disseminated it through the profession at large—it has collected into one focus an infinite number of scattered rays, that, dispersed among their native localities, would have shed a feeble light and then disappeared; but collected by our periodical, and brought to bear on our profession at large, have enriched the magazine of our professional knowledge, benefitted the interest of its scientific members, and given to our art an onward progress that years of wandering and isolated study never would have effected.

If in achieving these advantages a portion of its information should have got into other than proper channels, and have done some partial evil, I believe the injury so inflicted has been slight indeed. I am free to acknowledge that it is injurious to publish specifics for any disease unless clothed in scientific terms; but the evil thus pointed out can be readily avoided. I have, however, been often disgusted on reading the newspapers, particularly in the *Mark Lane Express*, letters from Correspondents requiring to be informed of the best remedy for particular diseases. Some time since I was struck with a moderate request in the above Journal



from a farmer, requiring to be informed by some veterinary surgeon the best way of curing his horses of the grease. I was almost inclined to write a note in reply, recommending him as the best and most effectual, and, in the end, the *cheapest* method to employ, to take the advice, and pay for it, of the most scientific and respectable veterinary surgeon in his neighbourhood.

I must, however, bring my rambling remarks to a close, and I will do so by expressing my own opinion, that, while veterinary knowledge is published in such a form that no one can obtain it, or apply it, without labour, trouble, and expense, we need not entertain a fear that the interests of our profession or its members will be injured by a mode of publication which other professions adopt with acknowledged advantage. While our elder sister, the medical profession, has its *Lancet* and *Gazette*, its monthly and quarterly journals, lessening by their efforts the aggregate of misery and increasing the happiness of the human race, oh! do not, my veterinary brethren, rob our profession of its only periodical, so long devoted to the cause of science and humanity, or deprive it of any of the means of its utility! The injuries we receive do not, I am confident, proceed from the promulgation of truth, but from the existence of ignorance, which leads, in numerous cases, to the employment of ignorant empirics in preference to men of science and intelligence.

I am, my dear Sir,

Your's truly,

W. C. SPOONER.

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They who have mingled so much friendly feeling, and so many good wishes, with the animadversions which an ardent love of their profession has drawn from them, may be assured that it will be the endeavour and the pride of the Editor to make this periodical still more effectually devoted to the cause of veterinary science: but more of this hereafter.

We turn to another class of writers, where approbation is indeed dear to us, and, we trust, will never be forfeited by us. We do not insert one-fourth of the kind letters which we have received during the last month, but sufficient to bind us ever to the cause in which we have been so long an humble labourer. We will take the few letters that we select in alphabetical order. The first is

*From Mr. JAMES ANDERSON, M.R.C.S., and V.S., Leicester.*

My dear Sir,—I received yours. You shall have my support in every possible way I can. By your leader in the last number of *THE VETERINARIAN*, I am extremely sorry to find that dis-

satisfaction has been manifested by some of the profession, *from selfish motives*. It is the ignorant, and those of contracted views, whose minds have never been expanded by reading and reflection,—these are the drags on the wheels of science.

You have nobly struggled, for the last thirteen years, in rearing your young VETERINARIAN ; he is become a fine boy, and no doubt will live many years after his father and present friends are gone hence, and seen no more. I have sent you an unique case, which I am sure will raise some steam, should it do nothing else. The composition may not be so refined as could be wished ; but I assure you that, between contested elections and my own business, I am nearly exhausted.

You shall soon hear from me again ; in the mean time, keep up your spirits ; for you shall be supported. Believe me to be  
Your's, faithfully.

As a professional body, for a series of years, we have been practising our noble art, with a view to the prevention and cure of the diseases of the lower animals ; and hitherto we have succeeded beyond our most sanguine expectations. I trust that my brethren of the profession will exonerate me of presumption in laying before them what I consider as an imperative duty, and the duty of every well-wisher of the profession.

Having studied human as well as veterinary surgery, it may be presumed, at least, that I ought to have some little knowledge of the diseases incidental to the human frame above the majority of veterinary surgeons. True, some may say ; but we do not want human surgery mixed up with our own in our valuable monthly publication. This I readily grant : my only excuse is, that the disease I am about to bring under your notice is of a very singular type—*sui generis*--and peculiar only to the veterinary profession. For want of a more appropriate name, I have designated it *veterinary jaundice*.

This species of jaundice is characterized by the patients seeing through a false medium.

*Causes*.—Produced by absorption of *fellis bovini* (not as John Taplin has it in the horse, from an overflow of his gall-bladder—he having no cystic bile). For some years past it has made its appearance in the metropolis and a few of the provinces ; but by judicious treatment the disease disappeared until May 1840, when it broke out afresh, and spread with great rapidity, and assumed a very malignant character. In consequence of Professor Sewell's far-famed circulars on the then prevailing epidemic among cattle, &c. addressed to the English Agricultural Society, and not as it ought to have been done, through the me-

dium of the veterinary surgeon, as Mr. Youatt states with great propriety in his last leader, "it did incalculable although we hope but temporary mischief to the veterinary profession. It likewise did—as all quackery must do in the long run—incalculable mischief to the farmer." However, it only attacked those predisposed, and rather of a sickly constitution, which is clearly proved by the great bulk of the veterinary profession, and almost every man of scientific repute, being fully exposed within the sphere of its virus without the least symptom of disease.

*Symptoms.*—The patients complain of the circulation of the Sewell-ine papers among their employers, and likewise of the publication of their own experience and practice being copied into other journals from THE VETERINARIAN; and hence too much publicity is given to their proceedings. They want the combined wisdom, knowledge, and practice of the profession to be exclusively published and circulated among themselves. In their opinion, this would prevent plagiarism by the farmer, the farrier, and the cowleech, &c. Such are the most prominent features of this malady.

The disease is dangerous in a young patient: but if it attacks an old person, and combined with hypochondriacism, it is incurable.

*Treatment.*—Can it be believed that such a disease could have taken place in this enlightened age—among a class of men that ought to know—and we are fully persuaded that the majority do know—that "the affectation of mystery may for awhile draw the admiration of the ignorant, but will never secure the esteem of men of sense; but will always occasion suspicion in the minds of the more enlightened part of mankind." Every attempt to monopolize or conceal any thing that relates to the preservation of health or the cure of disease, either by the human or veterinary practitioner, must not only be injurious to the interests of society, but likewise to the medical art. If medicine be a rational science, including surgery, and founded in nature, it will never lose its reputation by being exposed to public view; but if it be not able to bear the light, it is high time that it was exploded. Secresy in every art and profession lays a foundation for imposition. Had medical men never affected mystery, quacks and quackery would never have existed. Let us, therefore, act with candour and openness; then our employers will soon learn to dread every thing in medicine that has the appearance of secresy. The affectation of any mystery in any art or science retards its progress. Other arts and sciences diffused among the people have become the objects of general attention, and have been im-



proved accordingly. Literary societies, of all nations, publish their transactions. Professors and learned men of every profession give to the world their discoveries, opinions, and practice: ay, and are proud when they see their works quoted and transcribed into the periodicals of the day. Mr. Muntz very recently made a motion in parliament that physicians' prescriptions should be written in English at full length. These are not the days for medical secresy. The dark ages are gone by and nostrums, infallibles, and specifics must be erased from every medical man's book, whether human or veterinary. Nothing will make a man eminent in practice but what is based on scientific principles.

As jaundice is frequently attended by langour, inactivity, and loathing of food, we must endeavour to rouse into activity the dormant powers, both of body and mind, by reading, studying, and digesting. If we communicate the result through the pages of *THE VETERINARIAN*, each successive month will bring a fresh supply of tonic literary medicine, that will ease the brain, give serenity to the spirits, improve the appetite, and diffuse a glow of activity through the whole constitution. Small bleedings of 2s. 6d. per month by *THE VETERINARIAN*, for full thirteen years, have been found highly beneficial in removing obstructions in the ductus communis choledochus.

Icterus is often attendant on pregnancy: write for *THE VETERINARIAN*, and a safe delivery may be expected. In the convalescent state, a change of diet may be had recourse to, consisting of papers on chemistry, agricultural chemistry, medical botany, and pharmacy: in fine, a charter and an act of parliament will be the means of preventing all unqualified persons from practising, and will complete the cure.

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*From G. BAKER, Esq., M.R.C.S. et V.S., Reigate.*

Reigate, July 14th, 1841.

My dear Sir,—Previous to receiving your communication I had perused in my Number of *THE VETERINARIAN* the article to which you allude, and can only reflect with extreme regret upon the schism and want of union existing between the several members of our profession. Would each but consider himself to be united by principle in one firm bond of professional fellowship, this want of co-operation, these petty feuds and individual jealousies must necessarily cease. When a man can bring himself to regard one absorbing object in the closest point of view, provided always that it is not of a selfish tendency, it must naturally tend to throw all other objects into their relative

perspective. Could we but regard our profession as a body, of which we each formed but an item, we should no longer contemplate a part instead of the whole; but by referring every thing to our own individual and selfish ends, we split the rays of truth, and, consequently, contrive to see only one of the prismatic colours.

“Love thyself last :

Corruption wins not more than honesty.  
Still in thy right hand carry gentle peace  
To silence envious tongues. Be just, and fear not ;  
Let all the ends thou aim'st at be thy country's,  
Thy God's, and truth's : then if thou fall'st, O Cromwell,  
Thou fall'st a blessed martyr.”

In my opinion, nothing can assist the onward advancement of our profession more than the unreserved publication of periodical works : they bring before the public, in an interesting and instructive manner, the passing events of the times, and by exciting attention to them, materially tend to diffuse and increase the accumulation of facts. It is true, there may be, occasionally, some who will in an ungenerous manner avail themselves of our professional communications ; but a discerning public will ever be ready to do justice to well-earned merit. It might surely, with equal reason, be said, that the unrestricted circulation of Blaine's, Percivall's, and other professional works was an injury to the profession, and ought to be restricted by legal enactment. I fear you will think, like Paganini, I am playing only on one string, when I again state my firm conviction, that all these evils arise from one source, and will be best remedied by one antidote—a more liberal education of the veterinary students. The complaints which you state, of their adjourning to public houses to bandy party questions—the churlishness and absence of courtesy among themselves, and want of due respect for their Professors, arise from a want of those principles and habits which inculcate *self-respect* : without this, the mere possession of a diploma from the Veterinary College will never ensure to the uneducated possessor a position in society, or a companionship beyond that of grooms and stable-helpers. The human mind, like water, will naturally seek its level ; and it is only by elevating the education of the veterinarian that we can hope to supply the higher orders of society with a why for a wherefore, which their elevated position and superior attainments would probably lead them to appreciate. The charter which we are now endeavouring to procure will, I earnestly hope, be a successful means of raising our profession in public estimation ; but I would strongly recommend my pro-

fessional brethren to remember, that the self-rectifying principle must take root in the main body of the profession. There must be unity, harmony, and concord among ourselves ; for if the house be divided against itself, it cannot stand. An inconsiderable number of traitors, lukewarm adherents, and selfish adventurers within the camp, will operate more against a good cause than a thousand beleaguering enemies without. I see with much concern the want of courtesy, the virulence and party spirit, that too frequently animates those who should unite, as members of an honourable profession, in promoting its best interests, even at the sacrifice of their own personal prejudice. To descend to personal abuse is the most degrading means in which a man may meanly seek to avenge himself of his adversary. The laws of chivalry ever regarded that knight to be worsted in the conflict who was driven to the extremity of defending himself by dishonourable means or unknightly weapons ; “ but, alas ! ” says Burke, “ the days of chivalry are gone.” Let us openly avow our sentiments upon all professional subjects, listening with candour, and temperately considering the opinions of those who differ from us. The spark of truth is most frequently elicited from the collision of conflicting opinions ; and is not truth the main object of all our discussions ? The greatest enemy to truth is ignorant and bigotted prejudice—I say ignorant, headstrong, and bigotted prejudice ; because all prejudices are not necessarily bad things, although they may often do much harm. There are good prejudices as well as bad ones. We may be jealous for the honour of our country or of our profession, and entertain upon both subjects prejudices with which we would not willingly part, and which I sincerely believe to be honorable in themselves, if we do not unjustly detract from the merits of other countries and other professions. We are looking forward to a new era in *our* profession ; and most earnestly do I trust that, when we obtain the privileges we so much solicit, the boon may not be rendered nugatory by the unfitness of those to appreciate the benefit for whom it has been obtained. I believe education to be the lever that must raise our profession to its right and proper position. A lever to be fixed in the heads and hearts of its several members, elevating the former with thoughts, acquirements, and pursuits above the low and sensual associations of the ignorant and unlettered ; and kindling in the latter, that warm feeling of kindness, peace, good will, and universal charity, which shall extend itself in benevolent sympathy to every thing that breathes in the wide chain of organized being and

“ Lift to heaven the unpresumptuous eye,  
And, smiling, say, My Father made them all.”



I hope to see the charter we desire to obtain a bond of union, cementing and uniting all parties in our profession in one golden chain of mutual dependence and mutual support. Let us proceed with candour and caution, but, above all, with feeling and honour, "that finest sense of justice which the human mind can frame," and without which all professions are only giving paper credit instead of sterling cash. To those who are now training for professional pursuits, a reverence and respect for their teachers cannot be too strongly enforced. Contempt for lawfully constituted authority, and a disposition in the pupil to cavil with and criticise his instructors, is a proof of the truth of Pope's maxim, that "shallow draughts intoxicate the brain." He is just entering upon the career to which their time and talents have been for years devoted—they are willing and desirous to convey to him the fruit of their dearly-bought experience, and he is bound to receive it with respect and gratitude. Were the judgment of every presumptuous pupil to be regarded as an oracle, there would be as many standards of opinion as there are rebellious spirits whose self-will defies control. With every member of our profession would I urge the necessity of concord and union, of mutual concession and mutual support; for if we strive as brethren, we shall not strive in vain. Remember "in all youth's lexicon that leads to glorious manhood, there is no such word as *fail*." The combined energy and co-operation of the whole profession is all that is required to raise it to its proper standard, and firmly to establish its claims on public support.

I should have replied to your letter before, but having been rather unexpectedly called into Sussex, where I was detained, I really have not had time, and trust you will kindly excuse my apparent neglect. I much fear I have taxed your patience in the perusal of this long letter; but I felt so earnestly the importance of requiring a more enlightened and liberal course of education in the veterinary student, being convinced that this is the root of all our difficulties, that I could not avoid thus dwelling upon it. Properly educate the pupil, and be assured no injury will ever arise from widely diffusing the results of our professional labours. In conclusion, accept my best wishes for your long-continued health and happiness.

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*From Mr. S. BROWN, Melton Mowbray.*

“The false insidious partisan who creates or foment the disorder, sees the fruits of his dishonest industry ripen beyond his hopes, and rejoices in the promise of a banquet, only delicious to such an appetite as his own.”

My dear Sir,—As the veterinary surgeon, by virtue of his profession, renders himself the servant of the public, a question naturally arises, and one, too, worthy of much consideration, How far that public has a fair claim upon our professional services. If we view the great importance of our art with any degree of liberality, we shall feel assured that the whole of our professional duty does not consist in endeavouring to save the lives or alleviate the sufferings of domesticated animals within the limited circle in which we reside, but that it also behoves us to publish our experience in familiar terms, expressly for the purpose of advancing a science, especially one so noble in its objects and so advantageous in the estimation of that part of the community among which we reside.

The difference of opinion which exists among us upon practical points, probably promotes the advancement of veterinary science, inasmuch as it tends to excite a spirit of emulation among her votaries, which induces us to imagine that through perseverance we may ultimately succeed in the extension of our sphere of usefulness, by the discovery of more successful modes of treatment for the diseases of domesticated animals.

As we are all endowed with different degrees of mental power, of course we have different capabilities both for receiving and giving instruction; and when we consider the varying opportunities we have of gaining knowledge, it is probable that each of us may possess some little original matter worthy of being communicated to others. Such being undoubtedly the case, let us, for the love of truth and the honour and respectability of that humble profession of which we are members, fearlessly expose our practical principles to the test of public opinion in plain terms, and not dressed up in technical phraseology, which is known as only the jargon of science, and only regarded by common sense as the cloak of ignorance.

It appears that some worthy and well-meaning veterinarians deprecate the plain and detailed statements that have appeared on the nature and treatment of disease in some of our patients, and that much apprehension is entertained, lest such means should injure the interests of the profession, by promoting empiricism. But, if we bear in mind that *knowledge is power*, we shall feel assured that veterinary science can only assume its

proper character and bearing among other sciences, in proportion to the degree of liberality in which her votaries disseminate her practical principles.

If, however, we should adopt a style of writing known only to the members of the profession, probably it would be considered as a retrograde movement, and be regarded by every educated and enlightened mind both as an act of illiberality and a systematic attempt at exclusiveness, and this might soon hurl us back into that state of insignificance and ignorance from which we are but just beginning to feel ourselves emancipated.

As the pages of *THE VETERINARIAN* are devoted exclusively to the diffusion of veterinary knowledge, it is highly probable that, if a greater degree of liberality was shewn in the communications which appear in your valuable Journal, it might tend to check the increase of charlatanism more than any other mode of writing; for the modifications of treatment that are adopted in the different stages of disease, and which are so necessary to ensure the life of the animal, would not only shew the intricate nature of the science, but also convince educated men that we must devote much time to the study of anatomy and physiology before we can acquire sufficient knowledge of the animal economy to enable us, by accurate observation, to build up a superstructure in pathology, as well as other collateral branches of science—before indeed we can practise the veterinary art with success.

If you should think that the above remarks are likely to benefit the liberal cause, you may give them a place in the next number of *THE VETERINARIAN*.

I am, my dear Sir, ever faithfully your's.

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#### A FEW PLAIN FACTS FOR "THE VETERINARIAN."

*By Mr. J. CARLISLE, V.S., Wigton, Cumberland.*

*THE VETERINARIAN*, as a periodical, may at this crisis be truly styled the nucleus of the veterinary profession. Through the medium of that valuable Journal the veterinary practitioner has an opportunity of diffusing many valuable and important discoveries—by means of it he is enabled to keep pace with the improvement of medical times—chiefly by its means the veterinarian and the agriculturist have become intimately connected. The nobleman, and, in fact, every one who regardeth the life of his beast, contemplates with increasing interest the welfare of the veterinary profession; by means of its diffusion we have the means of knowing and learning the opinions and



treatment of our continental brethren ; and, almost in every other veterinary institution, through its means the profession has gained a higher station in the rank of society than was ever awarded to it before. Whence, then, arises the enmity with which some at the present day regard it ? whence the virulence of those who would compass it round about, and are labouring to overwhelm it. Who ever imagined, some ten years ago, that the veterinary periodical, the profession's pride, was in 1841 to be attacked on account of its too extensive circulation, its numerous though humble contributions, and its too plain system of stating cases that otherwise would not have been known ?

A question, then, has followed, Is *THE VETERINARIAN* to be confined to its circulation among the profession, or are many valuable statements of plain facts to be excluded from its pages for ever ? No : let that never be ! the veterinary practitioner must continue to contribute his mite, and the Journal must give its plain statements of the causes, the effects, and the treatment, &c. of diseases ; otherwise, most assuredly, were its circulation to be confined to its members alone, it would cease to be countenanced as a periodical—it would rank as a mere society oracle. Are its pages too valuable for public inspection ? or are its enemies afraid that some Paul Pry will discover their hidden stores of knowledge. The humble veterinarian must continue to give a plain statement of the causes, the effects, and treatment of diseases, and never for a moment trouble himself with the apprehension that his neighbour may get as wise as himself from the perusal of his cases. He will be more likely to receive his thanks and his recommendation for his able productions.

*THE VETERINARIAN* is both interesting and amusing to hundreds, as well as ourselves ; and I hope that it will continue to be supported, in spite of a few who seem ready to sign its death-warrant previous to its doomsday, for a motive very evident and too easy to explain. *Nil desperandum.*

The only improvement which I would propose in the management of *THE VETERINARIAN* is, that the cases should be plain straightforward cases ; but the prescriptions more complicated ; and that when it is necessary to mention ingredients in medical receipts, to use the proper technical terms.

I also think it would be advisable to avoid the quantum or necessary dose of the different articles ; for every veterinary surgeon is best able to judge from the state of his patient what he can bear, and to regulate the dose accordingly.

It may, perhaps, be as well to avoid the catechetical system, and to be cautious in answering many questions, except from veterinary surgeons alone.

There still remains another annoyance to the veterinary surgeon. There are a great many farriers in the country, and, perhaps, a few of them may take *THE VETERINARIAN*, and make themselves acquainted with some of our operations. What then? The human surgeon suffers from the same cause. No one can prevent the quack from reading *The Lancet* or *Medical Gazette*, or the apothecary from copying their prescriptions. It is to be hoped that the charter will remedy this evil; and we must blame ourselves if we do not obtain it in spite of College dissensions. Previous to Professor Coleman's death, Mr. Sewell was a great advocate for the charter. He used to say that, providing anything should happen to Mr. Coleman, he would immediately intercede for it. Has he done so? Are there within the College no liberal minded men, from whom we may derive assistance and support? Time will shew.

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*From Mr. A. S. COPEMAN, V.S., Walpole.*

My dear Sir,—It is with feelings of pleasure I obey your call; and although there are very many among your correspondents far more competent to do justice to the subject than I am, I feel a duty and a pleasure in submitting my opinion as to the most effectual course to be pursued in the present crisis.

Our cases, &c. should be clothed in more scientific language. In this I perfectly agree; but the exclusive system is a degrading and a mad one. I fear that the real cause of all this jargon is not yet evident. I heard of it long since—first from a veterinary surgeon, not many miles from the metropolis, and lately from several veterinarians of my acquaintance. From them I have learned that you are got into disrepute with certain parties for exposing the truth, and they are determined, by fair means or foul trickery, if in their power, to pay you for your trouble. Be assured that some exclusive trick to break up your Journal will be attempted. You must watch all the moves of the *private public house* party, for they may be sailing under false colours. Men of real science cannot be so inconsistent as to try to prevent the diffusion of knowledge, but secresy in any art is subversive of science, placing the person guilty of it on a level with the empiric.

Stand fast to your motto, and speak out; for a mincing, timid, partial declaration of the truth is own kin to a lie. Rather die with *THE VETERINARIAN* in your hands than resign a letter of it to the enemy.

One of this party asked me why I did not write my letter respecting the ewes of Lord H. to another person; for, said he, Mr. Youatt is not a veterinary surgeon—he knows nothing about the

matter—and he is hated by half the College members and students. I soon, however, found out the mystery of it all, and much sooner told him my mind.

You are at liberty to do what you please with the above hints. Wishing you success in your assiduous and laudable efforts for the improvement and diffusion of veterinary science,

I am, dear Sir, &c.

P.S.—Having induced a few of my best employers to become subscribers to your Journal, I can speak with confidence as to its effects. I find the more they read the more they see their own want of true knowledge, and the quack in his true colours; and instead of prescribing for their stock themselves, they are the first to send for my assistance. Certain I am nothing will produce more quackery than secresy, for it is its only true nidus.

*From Mr. J. M. HALES, M.R.C.S. et V.S. Oswestry.*

*To the Editor of "The Veterinarian."*

I have had experience enough of the world to know, that he who is fond of meddling in politics, whether general as regards the state, or particular as relates to some professional or other community, is embarked in a troublesome and often a thankless undertaking: yet there are "tides in the affairs of men," in which he is no patriot either to his country or his calling that would shrink from the responsibility of boldly and candidly expressing his sentiments; and such a period appears to me to have arrived in our profession, as I gather from the leader in the last VETERINARIAN, from Mr. Hayes's letter, and from Mr. Morton's speech.

With regard to the alleged abuses of the Veterinary College, which has been a common theme of late, I shall only remark, that I am as anxious as any one that that Institution should be all we could wish it, and this more especially, having had the honour of educating several young men for the veterinary profession, and having others whom I hope in due time will become members of the College. I have no doubt that improvements may be made in the system of College education, and shall be glad to know of their being adopted: but it occurs to me as an anomaly, that in a publication which many, it appears, deprecate because it too extensively makes known to non-professionals the increased scientific attainments and respectability of the art, writers should wish to spread their opinions of the incompetency and carelessness of the professors at the College. If it is bad policy to



make our good deeds known to the world, it surely cannot be advancing the cause, by declaring that the principal fountain from which we should derive our knowledge is nothing but a muddy pool; and if such statements have any influence with the public at all, it must be to lessen their confidence in a class of men who declare the system of their education to be so defective.

It is not, however, my intention to enter into any discussion relative to the abuses or non-abuses of the Veterinary College, and I should not have troubled you with this letter, but for the following paragraph, contained in the leader of the last number: "There have been for many years past a certain number of practitioners averse to the diffusion of veterinary knowledge; the periodicals have long been viewed by them with dislike and distrust. They are supposed to have been the means by which many points of useful knowledge were brought within the reach of the cowleech or the farrier, or occasionally the owner of the patient."

That such a feeling does in some measure exist in this district, I am sorry to be obliged to admit; for not many months ago an old friend and veterinary surgeon did me the honour to request my opinion on the subject; and said that other veterinary surgeons, with whom he had had conversation respecting it, were of opinion that the general diffusion of veterinary knowledge, through the means of *THE VETERINARIAN* and other publications, had worked injuriously for the interests of the profession.

My reply then was, and I now repeat it,—that it would be an everlasting disgrace to us to withdraw our support from *THE VETERINARIAN* on such a plea. If the exclusive system was to be strictly adopted, and works on every science only to be circulated amongst those who have a pecuniary interest in them, I am afraid the onward march of intelligence would very soon be changed for the backward march of ignorance. The surgeon, at all events, has quite as great a cause of complaint as the veterinary surgeon; for notwithstanding his charter, there are quite as many quacks in human as in horse medicine; yet I am well satisfied that if it was proposed, upon such ground, to suppress or restrict the medical periodical press, the proposition would be treated by the members of that profession as perfectly absurd.

To confine the circulation of a printed book to any particular class of persons is next to impossible, to say nothing of the unseemliness of so doing; for any one who chose to be at the expense, may and would obtain a copy, and the question becomes, whether a periodical publication from which the veterinary profession has, during the last ten years, derived incalculable advantages, and which has done more than any thing else to uphold and

advance the respectability of the profession, shall be suppressed, because it may, possibly, get into the hands of and afford information to those whom we consider our opponents; and opponents they will be, whether *THE VETERINARIAN* is published or not?—a question which I hope requires no serious refutation. If the argument is good for any thing, it is good to the whole extent, and should go the length of declaring that no veterinary works should be published, for fear they may get into unhallowed hands. But judging from my knowledge of the neighbourhood in which I reside, it appears to me that *THE VETERINARIAN* is circulated almost exclusively amongst veterinary surgeons. I have never seen it in the gentleman's study or the farmer's parlour, and am very sure it is not taken by the lower sort of farriers or cowleeches here: they could not read it if they would, and they would not take the trouble to read it if they could; for they are above all book knowledge beyond their book of receipts, and, perhaps, an old edition of Clater, or some such volume as that was thirty years ago.

I do not think *THE VETERINARIAN* likely to suit those who are fond of quacking their own horses or cattle. The information is too diffuse, and spread over too wide a range for them to find at once what they are in search of. They first perceive that the animal is ill—they then consult their oracle to discover what is the matter, and the receipt to cure it. They must have the “bane and antidote”—the complaint, and what will mend it—before them at one view; and, as the lady who is fond of physic-ing all the poor in her parish, has her “Domestic Medicine,” so the horse-quack has his “White.” But the former does not think of taking a medical journal, nor the latter *THE VETERINARIAN*.

It is true that the public papers took every opportunity to collect and circulate any information they could obtain relating to the “Epidemic” at the first commencement of that malady; and considering the consternation that existed in the country respecting it, and the anxiety to be furnished with some information as to its nature and treatment, the circumstance is hardly to be wondered at, and not perhaps greatly to be condemned. It is however my firm conviction, that, so far from our pecuniary interest being compromised by the free circulation of veterinary publications, it has been and will be advantaged by such practice; for if they do get into the hands of gentlemen and intelligent agriculturists, the result is, and will be, to increase their confidence in a class of men who have shewn that they possess literary and scientific attainments, and I have almost invariably found that they who have a taste for veterinary acquirements themselves are the best friends to the veterinary surgeon, and will in no way tolerate



the pretensions of the uneducated farrier, and are also the easiest to manage, provided they are dealt with candidly and straightforwardly; and *it is generally found that they who would wish to undervalue the profession are the conceitedly ignorant, who, having no pretension to knowledge themselves, are anxious to underrate its importance in others.*

I hope that I shall not be considered egotistical in remarking, that, having no fear of the spread of veterinary knowledge before my eyes, I have recommended many of my agricultural friends to procure those valuable works written by Mr. Youatt for the "Society for the Diffusion of Useful Knowledge"—the "Horse," "Cattle"—"Sheep," and instead of being deprived of practice by so doing, I am sure that many cases, particularly of cattle, have been submitted to my treatment that otherwise would not. Several friends have told me they were not at all aware of the nature and treatment of cattle till they had read that book; that they were quite convinced the cowleech knew nothing about them; and that, if I would attend their cattle they would employ me. The result is, that I am now called to attend several large stocks of cattle, while a few years ago I scarcely prescribed for a horned beast once in a quarter of a year.

I am sorry to find from the last number of *THE VETERINARIAN* that there is a dissension amongst the members of the Veterinary Medical Association. Of course I am not in a position to give an opinion of the circumstances which led to such a state of affairs; but if it is a jealousy that the essays and debates are published in *THE VETERINARIAN*, they will excuse me for saying—without the slightest intention to give offence—that they are acting unjustly towards themselves and the Association. They have no occasion to fear injury from the dissemination of knowledge; and for myself, I gratefully admit, that I have derived much pleasure and instruction from reading the published reports of their proceedings. I care not who reads our books, if we could but keep up a cordial and friendly compact amongst each other.

"No power on earth could make us rue,  
If to ourselves we were but true".

I must apologize for the length of this letter, but it is a subject upon which I was desirous to express my sentiments at the present time.

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*From Mr. J. D. HARRISON, V.S., London.*

If there ever was a time when unity among the members of the veterinary profession was praiseworthy, desirable, and most to be coveted, it is surely at the present moment, when all are anxiously looking for, and very many of its best and most zealous practitioners actively engaged in the common cause of endeavouring to procure us, as a body, that rank and standing in society that we ought long ago to have possessed, the want of which all have individually felt and most sincerely deplored—the attainment of which will place the rights and character of the veterinary surgeon on a firmer basis—will give him that protection in his professional career which I say (and I speak it without egotism) he is, from education and previous habits, equitably and lawfully entitled to; which veterinary science is truly deserving of, and is now proudly aspiring to obtain. Shall it, then, be said, and blazoned forth to the world, that, even during the time this grand project is in agitation, its members are not true to the profession and themselves; but that they degrade themselves by allowing the paltry thought of exclusiveness seriously to occupy their thoughts; or, what is still worse, can or will the members of the Veterinary Medical Association still persist in, and actually endeavour to put in practice, what in broad and plain terms they have asserted? No, no; I cannot think so meanly of its members, as even, for a moment, to suppose they can in reality seriously intend to persevere in such an unprecedented act; for they may be assured that this is not the time for such a procedure let the profession be what it will.

Our claims will, no doubt, ere long be brought before the tribunal of a British Parliament, composed, as we know full well, not of a few persons who are our compeers in the science we profess, but of noblemen and gentlemen, who, as agriculturists, feel and acknowledge equally with ourselves the necessity and justice of our claims, and who are able and willing to assist in the procuration of that which we all most ardently desire: but can we expect they will exert their interests and abilities in our behalf, when they find discord, envy, dissension, and illiberality, where all ought to be unity, peace, and good will? On the contrary, will they not, on perceiving such a spirit existing amongst the members of the profession, rather withdraw themselves and their interests from our cause, and thus leave us grappling with a shadow, when, in all human probability, we might have gained the substance?

In the expressed wish of many members of the Association

for an exclusive publication, I cannot but too plainly foresee its downfall; for "a house divided against itself cannot stand:" and, however specious and alluring the project may appear to those who framed it, the practicability will not be found so easy of accomplishment. In conclusion, I, as a member of the Association, enter my protest against any change; but should I unfortunately be over-ruled, on this, Mr. Editor, you may depend,—that, individually, I shall never forget the man who has fought all or most of our battles, and gained some signal victories; but that I shall still further tax my humble abilities, if by so doing I can add any thing to the common stock, or enhance the reputation of a Journal which ought to be the pride of English veterinarians, as much as it is the admiration of foreigners.

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*From Mr. ROBERT READ, V.S., Crediton.*

Although far from being in good health, I cannot suffer the August number to go to press without expressing my opinion of passing events.

During the last ten years I have been a reader of THE VETERINARIAN, and have been well pleased with its proceedings. It has been the means of making me verbally acquainted with the members of the profession, and I must confess that I have been benefitted thereby.

THE VETERINARIAN is the only channel through which members of the profession can be known to each other. Personal knowledge is out of the question, from various causes. I perceive in the last number of the Journal, that it is the opinion of some members that the plain exposition of our practice does harm. Now, in my firm conviction, it does good among the farmers; and so far from thinking that it is an evil, I often put THE VETERINARIAN into their hands to read some particular case; and thus much I can boldly say, that it has, in numerous instances, been the means of discarding the empiric and bringing the veterinary surgeon into their employ. It is well known, that nearly every farmer, every groom, every bailiff, and I may say half of our country gentlemen, think that to be a complete veterinary surgeon is to be possessed of certain receipts for every disorder. What has THE VETERINARIAN done?—why, plainly told them, that an universal panacea is all humbug, and that our practice is guided by rule and method, and not by hap-hazard treatment. Many who have read the work on "*The Horse*," from being a little initiated, are ten times more timid than they were before, and send for the veterinarian as soon as any thing

is amiss. Again, many farmers, bailiffs, &c. used to doctor for themselves; but, having lost a cow or a horse, they lose all confidence in themselves. Perhaps there is no practitioner in the kingdom more free in explaining the nature and treatment of disease than I am. It is easy to see a thing apparently done by a bystander, but let him try to perform the operation, and he sees his error. Now, for instance, I have oftentimes taught the farmer how to use the probang or flexible tube, but many have, to their loss, killed the beast, cursed the tube, and returned to the aid of the veterinary surgeon.

The only people to take advantage of the plain practice of the veterinarian are a few plainly educated empirics, for whom I think a remedy would be found,—that, in giving the treatment of disease, we were to confine our prescriptions more to Latin, and state the different feelings of the pulse under the finger in all our inflammatory diseases: thus, for instance, “pulse 60, artery full, not very easily compressed, *mitte sanguinem ex pleno rivo ad octarios undecem*.—2d day: artery contracted, corded, and strikes the finger sharp, *detrahetur sanguinem ad octarios septem*.” In such like manner should our treatment be described, and it would fully counteract any unfair advantage that might be taken of the explicit method in which the cases are detailed in THE VETERINARIAN.

I was well pleased to see the proceedings of the Veterinary Medical Society forming a part of your Journal; in fact, I would rather give five shillings per month for THE VETERINARIAN, than have any thing shorn from it: its volumes form the most prominent feature in my library, and may they be an heir-loom to my family!

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*From Mr. C. SNEWING, V.S., Rugby.*

I confess that my mind has lately painfully strayed to the storm of discord which I have fancied I saw brooding among the members of the profession. During many months past I have noticed the decrease of home contributions to the pages of THE VETERINARIAN; a Journal, which, from my heart, I do hope may not suffer, much less perish by that sordid power which, with pain I add, appears to hold sovereign sway in the breasts of so many.

Proud am I to say, that it has been the medium, and almost the only one, that I could gain access to, of imparting to me knowledge, with which I have been enabled easily to obtain and accomplish that end which before too often baffled and perplexed me.



Fully aware am I of the serious losses the members of the profession must sustain by the distribution of pamphlets and works upon veterinary science, some of which I have experienced, but by none, in so short a time, and so much, as by the distribution of that unpardonable, unjust, cruel circular which was distributed by the Royal Agricultural Society ; but, in the long run, there is another work which is doing me as serious an injury,—a work on which the eyes of the agriculturist appears rivetted. Embodied as it is with the impressive dogmas of its author, and the gleanings of by-gone days, it was sure to command attention, and to be read and acted upon by that body to which the country practitioner mainly looks for support. That book is no other than the one issued by the Society for the Diffusion of Knowledge, called “ Cattle ;” the author of which, I know, will pardon his young friend for the decisive but not too serious terms in which he has made mention of it. Although I feel it difficult to forgive him for this, yet, in his attempt to promote the welfare and increase the usefulness of my early favourite *THE VETERINARIAN*, I trust, my heart’s best wishes will be with him ; and happy shall I be to see the howling tempest subside, and concord and harmony once more dwell in the minds of the members of a profession which can now boast of an Association, the proceedings of which grace and add lustre to the character of the profession. That its proceedings should be recorded in *THE VETERINARIAN*, is indeed a boon. May they be long united, is my ardent wish.

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The Editor repents not of the appeal which has been made to the veterinary public. There has been during several years a jealousy prevailing among certain members of the veterinary profession, with regard to the opportunities which the public possess of becoming acquainted with the nature, and cause, and treatment of the diseases of several of our domesticated animals. It was supposed to be in the power of any one, who possessed in his library a few veterinary works, to comprehend, and successfully to treat, the diseases of the various quadrupeds.

There can be no doubt that various popular works, containing plenty of recipes for every possible ailment, by the ease with which they have enabled the horse-owner to set to work, whether skilfully or injudiciously, on his own stock, have done essential mischief to the practitioner and to the patient ; but, in the long

run, every thing finds its proper level. The possessors of these books, although sometimes learning wisdom a little too slowly, yet find at last that the professional man alone is able to suit his treatment to the real state of the patient. Our profession is as yet in its infancy, and, therefore, jealous of every rival: but medical men, who have passed through the same course and met with the same discouragements, have at length learned to view the matter in its proper light. The periodical press has completely lost its terror with them; nay, they would now view with indignation every possible attempt to prevent the fullest and freest discussion of all that has relation to the public health; and this will gradually be the case with our humbler profession. The number of those who build their faith on recipes, compounded, few know how, and producing effects which a still smaller number know how to estimate or describe, is rapidly decreasing, and the profession of veterinary medicine is daily assimilating itself to that of the human being. He, indeed, is becoming more highly and justly estimated whose practice is most scientific; while the labourer in the dark is left to the too frequent and fatal consequences of his blundering ignorance. Such was the progress of human medicine, and such will be that of the veterinary art.

There have been, but their numbers have gradually decreased, those who were jealous of the slightest interference of the scientific or medical man. It was a consciousness of their own ignorance which taught them this; but when they were competent to the task, and could meet their employers without fear—when practitioners were pursuing that course in the treatment of disease which common sense as well as scientific requirements dictated, he speedily found in the qualified veterinary surgeon the man he wanted: they understood each other's object and the mode of effecting it—the reputation of the one and the confidence of the other increased, and they became friends and associates; and the result of this association was advantageous to both.

Such was the connexion which was slowly but evidently forming between the owner of horses and cattle and the professional man whom he employed. It was but another form for the respect

and kindly feeling which existed between him and the medical man. And how came this union, so honourable and so advantageous to both, to be shaken to its very foundation? Soon after the establishment of the English Agricultural Society, a fearful epidemic broke out among the cattle in every part of the kingdom. In many cases it was destructive to life; in more it was injurious to condition, and the Governors of the Society were naturally anxious to arrest its course. How did they attempt to accomplish this? Not by convening a meeting of a few of the best practitioners in cattle medicine, who might ascertain the real character, and causes, and management of the disease, and send to their brethren in the various parts of the kingdom a sketch of the result of their inquiries, and their opinion of the course that should be adopted; but they go to the Veterinary College, the Professor of which, from the previous absurd and injurious plan on which that establishment had been conducted, had never seen a dozen cases of cattle disease in his life, and they induce him to draw up, almost at hap-hazard, a sketch of the treatment which should be adopted; and this is despatched, not to the veterinary surgeons in different parts of the country, to adapt to the changing circumstances which each locality would present, but to every member of the Agricultural Society—to every man who had subscribed his pound. And what was the consequence of this? In a great proportion of cases, the veterinary surgeon was no longer consulted. A kind of disseverment took place between him and his old employers, which for many a year will leave its injurious effects. The farmer, the bailiff, and the gentleman, began to doctor for themselves. In milder cases, the animals got well—in others—and they were not a few—these persons confounded themselves with regard to the indications of bleeding, and purging, and feeding, and many an animal was lost who ought not for a moment to have been endangered. The natural course of things took place with regard to cattle which would have been the result of the treatment of influenza in children, if directions for the treatment of them had been distributed not among medical men, but among ignorant cottagers in some unhealthy season.

The diminution of the employment of the veterinary surgeon being in many cases almost destructive to his professional career,



he looked about him for other causes of the evil; and hence arose the spirit of bad feeling which has of late prevailed among certain classes of the students and the practitioners. We have not, however, time or space to enter into this at present. It shall be fully but candidly treated of in our next number. In the mean time any remarks from our friends will be thankfully received.

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The following announcement appeared in a late number of the *Mark Lane Express*, as a notice from the Professor of the Veterinary College of the proceedings of the Governors of that Institution:—

“ INFIRMARY FOR DISEASES OF CATTLE.

“ Professor Sewell, of the Royal Veterinary College, St. Pancras, has informed the Society that the Governors of the College have been pleased to express their approbation of his efforts, formerly communicated to the Council, to establish a Cattle Infirmary, and supply the means of instruction in the treatment of diseases, by having engaged to undertake the medical care of the extensive dairy belonging to Thomas Flight, Esq. (formerly Laycock's dairy), Islington, free of any expense, on condition that the pupils who are desirous of practising that highly important branch of the veterinary art may attend the same daily. The Governors having unanimously voted a grant of £100 to Professor Sewell, in consideration and on account of the expenses he had already incurred to the present Midsummer, have at the same time resolved to place at his disposal the further sum of £200 in furtherance of the same object. Professor Sewell has further stated, that Mr. Pusey, the President of the Royal Agricultural Society of England, having expressed his approbation of the plan originally proposed, and the Duke of Richmond, Mr. Handley, and other members of the Society, having, at different times, visited the dairy and infirmary, and fully concurred with him in its eligibility in every respect for the intended purpose, he should spare neither pains nor expense to accomplish the views of the Royal Agricultural Society of England, in promoting the success-

ful application they so anxiously desire, of the veterinary art to domestic animals in general; and that those pupils of the College who attended and underwent a satisfactory examination on these branches of practice and study, would have an additional clause, expressive of their proficiency on those points, appended to their respective diplomas.

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The Editor has great pleasure in announcing, that on one of the evenings of the sojourn of the English Agricultural Society at Liverpool, a meeting took place of those who had witnessed the earliest commencement and rapid increase of the Society. Among those who were first and most active in its establishment was the original Secretary, Mr. Shaw. His whole time was occupied in rendering his humble but most valuable assistance to the noblemen who, so much to their credit, occupied the higher seats at the board. Some acknowledgment of respect and thanks is due to him who first commenced the work, and whose labours in it were unwearied. Messrs. Baker, of Cottesmore, and Hillyard of Thorpeland, were most active in summoning this meeting, a satisfactory account of which will, we doubt not, be shortly laid before the public.

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## TREATMENT OF INVERSION OF THE UTERUS IN A MARE.

*By Mr. JAMES HORSBURGH, V.S., Dalkeith.*

IN the following letter I would beg leave to direct the attention of the profession (though without finding fault with the book-makers) to the practice almost generally pursued in inversion of the uterus. This must have come under the notice of every veterinary surgeon who has a moderate share of practice, especially in the country, and to them these remarks may be of some little use: but to the young theorist or essayist especially, who, as he sits with perfect ease in the lecture-room, can manage one of the most difficult cases of parturition, dismember the calf in utero, do what he pleases with the viscera, and dispose of the whole of them with a dash of the pen,—this may, perhaps, be most acceptable.

Being situated in the midst of an agricultural district, and having had for a considerable number of years an extensive practice, almost all sorts of cases of difficult parturition occasionally occurring, I have no doubt that I shall be borne out by all practitioners similarly situated, in saying, that they are the worst cases to which our attention can be called. In these cases of difficult labour I have adopted a plan different from that generally used by the cow-doctors, of which almost every village possesses one, and also from most of my brother practitioners that have written on the subject.

In the cow it is very common, more easily reduced, and not so dangerous as in the mare, in which it seldom happens ; but as several have come under my care, I will send you an account of a case that recently occurred, as being similar, or nearly so, to that which occurs in the cow.

On the 4th of May last I was called in haste by a groom to attend a mare at the stables of his Grace the Duke of Buccleuch. She had been suddenly taken very ill. She belonged to Mr. O. Fairlie, from Ayrshire.

Taking a few medicines that I supposed I might want, I went to see her, and was met by another groom at the gate, calling out to hurry on, as he thought she would be dead before I saw her. When I got to the stable, I found her down, rolling in great pain, as if from spasmodic colic ; and on getting time, after awhile, to inquire what was really the matter, I was informed that she was found a short time before with the uterus inverted. She had foaled three days before, and had been looking well until that day. The pulse was 75, and the spasms violent.

I immediately gave her some extract of hyoscyamus and gum opium dissolved in a pint of warm water, and proceeded to cleanse the uterus by fomenting it with a large cloth for about ten minutes. By this time the sedative effect of the medicine became apparent, as the spasms were much less frequent, &c. I got her on her feet, put on a twitch, and proceeded to return the uterus (first having sponged it over with a little vinegar and water), by taking hold of a clean towel in the left hand, doubled, and the corners of the towel falling back on the arm, made bare for that purpose. I then applied the doubled fist to the fundus of the uterus, with the assistance of the right hand in bearing it up by a moderate degree of force, and returned it to its place, slowly withdrawing the hand, and leaving the towel for a few minutes.

I next proceeded to remove the towel, by introducing the hand greased for the purpose into the vagina, taking it by the corners, turning it several times round, and at the same time bringing it slowly out. After which, I introduced the arm to the full



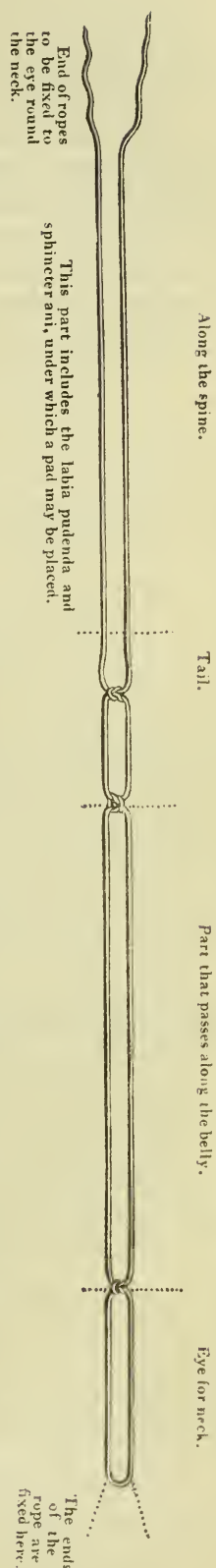
length, in order to ascertain whether it was in its proper position, using a little force on the further end, in order to stretch it. I then withdrew the arm, and proceeded to apply the necessary bandages.

First, a strong girth or surcingle was buckled tightly round the abdomen, to prevent the muscles acting with such force as again to expel the uterus. This is essentially necessary. I then took a small rope or narrow web (the one used on this occasion was a cavison for breaking horses in the lunge), from an eye on the middle to be passed over the neck, as if for casting. I then passed the ends between the fore legs, along the belly one on each side the udder, up between the hind legs, tying a single knot on the ropes, in order to come exactly to the inferior part of the vulva. Another was placed superior to the sphincter ani, carrying the ends up on each side the tail, forward along the spine, fixing them securely and tightly to the eye round the neck on each side the withers. The annexed sketch of the rope will better shew the plan.

The superiority of this over the plan commonly pursued, by passing sutures through the labia pudenda, will be at once apparent. The suture is cruel in practice, and disgusting in appearance; besides it does not, in bad cases, answer the intended purpose.

I have seen many cases in which sutures had been used: they were torn out by the uterus being again protruded, making lacerated wounds, that on healing left, for the remainder of life, marks which too surely told what had been done at some former parturition; and which also, perhaps, told one who would otherwise have been a purchaser, that there was risk in taking such an animal.

The plan here pointed out has none of these bad effects. Once put in practice, its utility becomes immediately apparent. It can be adjusted in a few minutes, and being once properly fixed, any exertions to force the uterus out again are vain; as the rope embraces the labia and sphincter so closely, that the more



force is applied, the firmer the parts are held. At the same time the necessary excretions are performed without the least difficulty.

The case above alluded to, had, no doubt, been occasioned by inflammation; the uterus had the appearance of liver, which, being three days after foaling, was rather unusual.

On getting the bandages properly secured, she was bled until the pulse was affected. A smart dose of physic was administered; the lumbar region extensively blistered, over which a newly killed sheep-skin was applied.

The case went on well. In three days she was freed from the restraint of bandages, &c.; returned gradually to her former feeding; and is now sent home. She was stunted to his Grace's horse Galewood, for which purpose she has been sent here.

## ACCOUNT OF AN ANASARCOUS DISEASE IN SHEEP.

*By J. TOMBS, Esq., V.S., Pershore.*

THERE has been a disease very prevalent among sheep in this county: it made its appearance about a week after they were shorn. A swelling came on near the udder and extended along on both sides the abdomen to the anterior extremities. After it had existed for some time, a swelling on the inside of the thighs came on. The pulse was quick and feeble; the eyes had a peculiarly watery appearance; the animals were very soon emaciated. The shepherds very improperly called it murrain, as it was to all intents and purposes anasarca—the swellings, when punctured, discharging a watery fluid. The causes of the disease were cold and wet weather when shorn, and eating wet grass. Many shepherds, thinking it was murrain, dressed the sheep with liquid caustics, which killed them outright. The cases that came under my notice yielded to repelling lotions, and the exhibition of diuretics and vegetable tonics. I had not an opportunity of being present at a post-mortem examination.

## OBITUARY.

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MR. ALEXANDER WILKIE, VETERINARY SURGEON, FORFAR.

MR. WILKIE died about two years ago : he was thirty-five years of age : he obtained his diploma at the Edinburgh Veterinary College, in 1831. He was a bold and scientific practitioner, and had an extensive practice, which was daily increasing, when, unfortunately, in the administering of some medicine to a glandered horse, he scratched one of his hands, and glanders was thereby communicated.

Mr. Lyon, veterinary surgeon, Forfar, lately sent me an account of his death, a copy of which I forward to you.

“The late Mr. Wilkie sent for me that-day-week before his death. He complained that he was rather uneasy, and cold, and that no medicine he had got would make him perspire, or change these sensations in any way. He wished me to give him antimonials in great doses, but, considering him dangerous, I declined giving him any thing, and rather called upon his doctor. I also made his bed for him, and promised to call again; but, being busy, I had no opportunity. The symptoms of glanders were not then manifest, nor did they appear for two days after; but when they did make their appearance, I understand the sight of him was most horrifying; the discharge from the nostrils, eyes, and mouth were so extraordinary, that the virus was running down his cheeks and round under his chin. He was vaccinated by the absorption of the virus from a scratch on the side of one of his hands, while treating some glandered horses belonging to Mr. Cambell, innkeeper, Dundee.

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## VETERINARY JURISPRUDENCE.

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WILLIAM BROWN v. JOHN ELKINGTON.

FOR the plaintiff, Mr. Balguy, Q.C., and Mr. Mellor; for the defendant, Mr. Hill, Q.C., and Mr. Humphrey.

Mr. Mellor opened the pleadings, and Mr. Balguy stated the case, which originated in the purchase of a horse made by Mr. Brown, veterinary surgeon, of Warwick, from Mr. Elkington, of Ryton, upon a warranty from the latter individual that the animal was sound. On the part of the plaintiff it was sought to esta-



blish a breach of warranty, and in support of this view the following evidence was given.

Mr. Abraham Umbers:—I am a farmer living at Weston Hall, in this county. I know Elkington the defendant; he resides at Ryton Heath. I know Mr. Brown, the plaintiff, who lives at Warwick, and is a veterinary surgeon. I recollect seeing Elkington at Coventry market on Friday, the 30th October, 1840. I knew he had a horse for sale. I asked if he would allow me to ride part of the way home with him, as I had a friend who was likely to buy the horse. He said I should. I did. On the following Wednesday (the 4th of November) I went over with Mr. Brown to the defendant's house. He was at home. I saw the horse; Mr. Brown was with me when I saw him. At that time I was aware that the horse had been returned from Mr. Thillipson. Had spoken to Mr. Elkington many times on the subject of the horse being returned. When the horse was shewn to me on the 4th of November, I understood Mr. Elkington that it had been returned for restiveness. Mr. Brown got upon the horse, and Mr. Elkington accompanied him to Baginton, where Mr. Hellier's hounds met. I went with them. Mr. Brown rode the horse. As he was going along, Mr. Brown said, "I believe you say the price is sixty guineas: you ought to take something off, considering that he has been returned for restiveness—that I bar—he has also suspicious hocks." Mr. Elkington said he would warrant him sound to any man in England, and would not bate a farthing. We rode on to Baginton, and when we got there Mr. Elkington wanted Mr. Brown to determine, as he (Mr. E.) wished to go home. Mr. Brown then said, that if he would bate £3 he would buy the horse. Mr. Elkington said he would not; he would take it home. Mr. Brown then said, "I did not come to chaff you, nor to be chaffed myself," and Mr. Brown gave me his purse to pay for the horse. I took out £60 to pay for it, and it was arranged that I should pay the other £3 when I met Mr. Elkington at Coventry market.

*Cross-examined.*—After Mr. Elkington left us at Baginton we continued to follow the hounds: it was a very wet day. It was on the 4th of November that Elkington said he would warrant the horse sound to any man in England. The hocks were evidently curby. Mr. Brown said that they were very bad hocks. Mr. Elkington did not say, "he has never been lame, and I warrant he never will go lame." He said, "he never has been lame, and I will warrant he is sound to any man in England." Mr. Brown had been there before with me to see this horse. He went to Mr. Elkington's house about a fortnight before. The horse was brought out of the stable. Mr. Brown saw the state

of the hocks : Mr. Brown noticed them, and said that they were bad hocks ; there appeared to be curbs on both. I had no doubt about their being curbed hocks. I knew the horse had been returned from Mr. Thillipson, but not that it had been returned for unsoundness and bad hocks. I am sure that I did not understand that the horse was returned for bad hocks. I never was told that he was returned for unsoundness. I believe that Mr. Hadley told me that he was returned for restiveness, and not for bad hocks or unsoundness. I had asked Mr. Brown, once or twice, to go over and get the price of the horse for myself. I will swear Mr. Elkington did not say that the horse had had bad hocks, and that that was the reason he had been returned from Mr. Thillipson. I have never said that the horse was bought for myself. Mr. Elkington might have asked me whether I bought it for myself ; but that was not on the day he sold it, but a fortnight afterwards. I believe my answer was, “ Who paid for it ? ” I considered that a straightforward answer. That was not when Mr. Elkington received the rest of the money. I had no conversation at that time respecting the bargain. When I first went about the horse, I did not say that I wanted it for Mr. Brown.

*Re-examined.*—The horse was a brown one.

George Griffin, groom at Mr. Brown's stables at Leamington, proved that early in November last a brown horse, called Solomon, bought of Mr. Elkington, was placed under his (witness's) care ; that the next day he was ridden four miles with the hounds, and came home quite sound, and went to Grove Park the next week, where he was sent for Mr. Lawley ; that on the following morning the animal was a little stiff in the off hock, for which he was fomented with hot water, and had physic. The horse got well. A severe frost ensued, and hunting was stopped for seven weeks. After the frost had disappeared, the horse was hunted one day, came home very lame from the effects of a bad curb, and was never hunted any more.

In his cross-examination, witness said that he did not tell two gentlemen who came to look at the horse, and remarked upon the badness of the hocks, “ that his master bought him with those hocks.” He said that his hocks were “ always naturally curby.”

Mr. T. P. Ward deposed that he had seen Mr. Lawley riding a brown horse on the day that the hounds met at Grove Park ; that it was a very slight day's work, no fox having been found till three o'clock, and a run of only two miles and a half ensuing. Witness afterwards saw the same horse at Mr. Brown's stables.

Mr. Charles Snewing, a veterinary surgeon of Rugby, stated that, in October 1838, he was sent for by Mr. Thillipson, who resided in the same place, to examine a brown horse ; which he

found unsound, with a diseased hock\*. He had lately seen a horse at Mr. Brown's stables, which he believed to be the same animal. Witness had seen Mr. Elkington relative to a horse which he (Mr. E.) had sold to Mr. Brown some time during the last autumn; Mr. Thillipson's name was mentioned in the course of the interview. Mr. Elkington told witness that the horse was the same which had been returned to him from Mr. Thillipson two years before.

Mr. William Packwood, another veterinary surgeon, living at Coventry, recollected that two years ago he had a conversation with Mr. Elkington, who asked him whether a horse was returnable for having curby hocks? Witness said he was. Mr. Elkington then said, "I have sold my brown horse to a gentleman at Rugby, and Mr. Snewing has given the gentleman a certificate of his being unsound in the hocks." Witness said, "That being the case, for God's sake send the gentleman his money back, and take the horse again."

George Daniels, who was in the service of Mr. Thillipson at the time alluded to, stated that he took the horse, by direction of his master, to the Black Dog, Stretton-upon-Dunsmore, and told Mr. Elkington the horse was returned on account of his curby hocks. The horse shewn to witness at Mr. Brown's stables was the same animal.

David Cooke, groom at Bindley's Repository, Birmingham, proved that a brown horse sent to that establishment by Mr. Brown, was sold on the 4th of February last for £19.

Two letters, written by the plaintiff's solicitor to the defendant, were read, one of which gave the latter person notice of Mr. Brown's intention to sell the horse at Bindley's Repository.

Mr. Snewing, being recalled by the Judge, in answer to questions from his Lordship, stated that a "curby hock" "is a phrase made use of by sportsmen, horse-dealers, and others, as indicating a peculiar conformation in the structure of the hock, which renders the horse liable or predisposed to throw out, or spring, a curb; which liability or predisposition is not, in my opinion, an unsoundness." A curb is unsoundness. After a curb is removed the horse is not unsound; but during the time the swelling on the hock remains, the horse is unsound.

Mr. Hill addressed the jury, and contended that the testimony of Mr. Snewing satisfactorily established the soundness of the animal at the time of purchase, an opinion in which his Lordship

\* The disease to which reference was here made consisted of a bony enlargement on the outer part of the hock, seated at the junction of the cuboid with the lower cuneiform bone, and which I afterwards ascertained was the result of a blow,—an injury.—C. S.



concurred ; but Mr. Balguy expressed his wish that the case should go to the jury.

The learned Judge having charged the jury, they, after some slight deliberation, returned a verdict for the defendant on the issue of unsoundness, and for the plaintiff on the other issues.

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## ON GLANDERS.

INTRODUCTION OF PURULENT MATTER, TAKEN FROM A HORSE NOT AFFECTED WITH GLANDERS, INTO THE VEINS OF A MARE—DEVELOPMENT OF ACUTE GLANDERS—INOCULATION WITH THE GLANDEROUS MATTER THUS PRODUCED—THE PRODUCTION OF GLANDERS.

*By Messrs. RENAULT and H. BOULEY.*

A MARE, nine years old, and of excellent constitution, was brought to the Veterinary College at Alfort, on account of lameness in the right hind-leg. It was fracture of the os innominatum; and the owner, to avoid the chances of long surgical treatment, had abandoned her to the school. She had been kept a month in the hospital, and a variety of clinical experiments had been tried on her. The lameness not decreasing, we attempted the experiment about to be described.

She had every symptom of health except her lameness—no flux from the nose, or enlargement under the jaws. The respiration perfectly normal, the pulse regular, and the mucous membranes presenting their natural colour.

On the 22d of April in this year, we took some healthy pus from the tail of a German horse that had been nicked, and from a seton in a mare. The quantity collected consisted of about two drachms, which was mixed with a little distilled water, and passed through a cloth filter. After being thus filtered, it had the appearance of a yellow opaque and perfectly liquid emulsion. We then opened the jugular vein with a large fleam, and, by the assistance of a funnel introduced with precaution into the orifice, we caused it to mingle with the blood.

Immediately afterwards her respiration was disturbed; the movements of the flanks were precipitate, and violent; her sides rose and fell convulsively, and the nostrils were much dilated. The pituitary and conjunctival membranes became red; the pulse beat violently, and the movements of the heart were tumultuous. Five minutes afterwards she twice voided a considerable quantity of faecal matter.

In half an hour, all these abnormal phenomena began to disappear; and, in the course of the day, every function seemed to be perfectly re-established, and she took, with appetite, her usual food.

*22d.*—She is in good spirits, and feeds well.

*23d.*—The conjunctival and pituitary membranes are yellow, with a livid tinge of the colour of saffron. The eyes were infiltrated with a limpid serosity, which ran down the cheek every time she closed them. The pulse was hard, but not quickened. An abundant serous diarrhœa had commenced. The appetite was good.

*24th.*—The saffron tint remains—the mare is a little out of spirits, and disinclined to move—she is less irritable than usual—her appetite is a little diminished—her lips and nostrils are hot—the expired air likewise communicates a feeling of heat—a fluid is discharged from the nostrils a little yellow, but not adhering to the sides of the nose. The right leg, the seat of fracture, is much swelled.

*25th, 26th.*—All the symptoms are aggravated. The fever is more intense, and the pulse concentrated and quick. The strong beatings of the heart can be seen. The colour of the conjunctiva is yellow, and the eyelids are becoming sore. The discharge increases.

*27th.*—The teats are swelled and the vulva is infiltrated with a serous fluid. The hind-legs, and especially the right leg, are œdematous. The mare has lost all her spirits—the eye is half covered by the upper lid—its mucous coat is saffron-coloured, spotted with red—the expired air is hot—the lips are burning—the mouth dry—the pulse small, quick, and concentrated—the beatings of the heart tumultuous—the discharge from both nostrils abundant, flocculent, and of a citrine colour.

*28th.*—The swelling of the udder has increased, and has reached the abdomen. Farcy pustules are developed on the outer side of the right thigh. The discharge from the nostrils is much greater than yesterday; it is glairy, adhesive, and of a characteristic saffron colour. The nasal membrane is infiltrated and marked with spots of a deep red, yet tinged with saffron. On the left side of the septum is a lenticular pustule, white at its summit, and surrounded by a red areola; the sub-maxillary glands are enlarged and tender; the animal is completely dispirited, and the general febrile symptoms continue.

*29th.*—Other pustules have risen on the nasal membrane in both the cavities; some of them are whole, and have the character of those which we have just described; others have smaller ulcers at the base of the larger one. The edges are prominent,

and appear as if they were distended by fluid; around is a deep red areola. The discharge now dries on the nostrils, and adheres there. The breath has a faint sickly smell. A farcy eruption is observed around the nose, and eyes, and cheeks, and neck, and on the outside and inside of the thighs: every symptom is now aggravated.

*May 1st.*—The ulcerations in the nasal cavities are enlarged. The mucous membrane of the nose presents large black petechial spots. The alæ of the nose are infiltrated, and the respiration through the nose is attended by a whistling sound. Large farcy cords now run like ridges along the cheeks and the ganglions of the lower jaw, which are very much enlarged, and the buttons and the cords are multiplied over the whole surface of the animal. The œdema of the chest increases, and extends far along the chest. The hind limbs are become so large, that the animal finds considerable difficulty in walking. The respirations are precipitate, the pulse is scarcely perceptible, and the contractions of the heart are tumultuous. Towards the evening the patient became so weak that she was no longer able to stand. She fell, and, after some convulsive motions, died.<sup>1</sup>

*Examination*, ten hours after death:—

*The nasal cavities.*—The mucous membrane which lines the interior of the nasal cavities is the seat, throughout its whole extent, of a livid red injection. This colour is deepened by the sanguineous engorgement of the large subjacent venous sinuses. In the superior part of the nasal cavities the tissue is completely black. On the surface of the pituitary membrane, as well upon the cornets as the septum, are spots of a yellow white, irregularly formed, and of various dimensions—here isolated like small tubercles, and there deposited in lines, and in some places as large as marbles. Scattered about were ulcerations, having projecting borders, white, infiltrated, and surrounded by a livid red areola. These ulcerations were in some places so united together as to form one vast wound. The changes had more perfectly taken place on the left side than on the right. The frontal sinuses were filled with citrine-coloured serosity. The membrane which lined them presented one vivid vascular injection.

*The lungs.*—The left was more affected than the right. Its surface presented a great number of elevations, which projected under the pleural envelope, and gave to the hand that explored them the sensation of large tubercles buried in the substance of the organ. These granulations, being cut into, present very different appearances. Some of them seemed to be formed of a very circumscribed infiltration of black blood into the pulmonary tissue. Others exhibited a red areola at their circumference, and their



centre was formed of a white matter, mingled with red, and of the consistence of cheese. Some of these granulations were softened in the centre, and the matter which formed them was of the nature of pus. The right lung presented the same changes, but not so much advanced. The lymphatic ganglions under the tongue were exceedingly vascular, and infiltrated by a citrine-coloured fluid, that may be easily pressed out of them. Their substance also contained some purulent depôts, which filtrated across the openings of numerous vessels, the interlacement of which constituted the ganglionic substance.

*The liver* was increased in size, and its substance was diffuent. There were not any granulations in its substance.

*The cellular tissue* in the œdematous parts was infiltrated by a great quantity of citrine-coloured serosity, that gave it the remarkable trembling appearance of gelatine. The same infiltration existed around the farcy cords and buttons. The centre of these cords was formed by a lymphatic engorgement of purulent matter. The buttons or pustules consisted of an induration of subcutaneous cellular texture in a circumscribed space, with a central collection of pus or purulent serosity.

*The heart* was flabby, and discoloured as if it had been baked. Black ramifications followed the course of the veins. Ecchymoses lay under the serous membrane. There was no discoloration of the internal surface of these vessels. The blood was rarely coagulated in the larger vessels. There was no trace of inflammation in any of the articulations.

That no doubt might remain as to the nature of the disease produced by this experiment, another horse was inoculated with the matter discharged from the nostril of the first. This was a strong horse, of excellent constitution, but which had been under treatment for a considerable period, on account of caries of the bones of the foot. He was inoculated on the 28th of April with matter taken from the nostril of the mare. Four punctures were made. On the following day these punctures were covered with a new layer of purulent matter from the glandered mare.

On May 2d these punctures began to exhibit the peculiar engorgement that infallibly announces the virulent action of the poison by which this animal was inoculated.

From the 2d to the 13th of May all the characteristic symptoms of acute glanders successively appeared, and on the 14th the animal died. The post-mortem examination left no doubt as to the accuracy of our prognosis during life. The horse evidently died of acute glanders.

This experiment was not the only one which we made, and with the same result.

We have also experimented on the dog, with the same precaution of filtering the pus before the injection, and we have produced a disease of the lungs very much resembling that of the human being that had been destroyed by glanders. The nasal cavities, throughout their whole extent, were the seat of the most acute inflammation. At the lower part of the septum, on the left side was a black spot, softened and ulcerated. After these facts, and others which have been published in the *Récueil*, is it too presumptuous or too soon to conclude that glanders is produced by the presence of pus in the circulation? Sometimes even in the human being it is developed spontaneously in purulent fevers, which clothe themselves with the character of acute mange and acquire these virulent properties, without its being necessary to trace it back to contact with the glandered horse, in order to explain the development of this strange disease.

*Réc. de Méd. Vét., Mai 1840.*

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### CASE OF INVERSION OF THE BLADDER DURING PARTURITION, AND EXCISION OF A PORTION OF THAT ORGAN.

*By M. CANU, Père, Thorigny.*

ON the 25th of May 1815, I was requested to see a mare, suffering severely from laborious parturition. I found her lying on her left side, covered with perspiration, and her labour pains frequent and violent. The proprietor had rendered her his assistance, and the foal had lived about half an hour; but the mare had suffered much before she was relieved. A large portion of membrane which hung from the vulva made me suspect that there was inversion either of the vagina or the uterus. The proprietor told me that he had long attempted in vain to replace it. I examined her very carefully, and, not being able to satisfy myself to what organ it belonged, I caused her to be lifted up. This was accomplished with difficulty, for she could not stand without support. She was, however, making continual attempts to expel this substance, and in so doing her urine was propelled to a considerable distance.

I was far from suspecting inversion of the bladder, never having met with it, or heard of its occurrence in veterinary medicine. The stable was dark. I ordered a candle, and then, separating the lips of the vulva, I could see to the bottom of the vagina. Every thing appeared to me to be in its place, and I began to suspect inversion of the bladder, although I could scarcely believe the possibility of it. I then traced the inferior

surface of the vagina, but found no meatus urinarius. The flap of membrane commenced at this place, and, after some violent efforts, the ureters lanced the urine to a considerable distance. It was now plain enough to me that it was the bladder which I saw hanging from the vulva. I examined it anew, and I found that the proprietor, in endeavouring to force it back, had torn it at the fundus.

What was I to do? Force the bladder back? The urine flowing into the abdomen would inevitably produce peritonitis, that would be speedily followed by death. Was I to continue to let it hang thus projecting? Gangrene would soon attack it, and already it was of a violet colour, and exhaled a putrid smell at the part where it was rent. I informed the owner of the imminent or irremediable danger which threatened the patient; but, as he could not resolve to destroy her, he entreated me to do all that I possibly could for her.

I abstracted nine pounds of blood, and ordered a restricted diet and repeated injections. I saw her several times every day. The bladder became more and more black and swelled, and the thighs were excoriated by the flow of the urine. We bathed the bladder with warm water, to which a little vinegar had been added.

On the 29th, I chanced to meet my friend M. Diquet, Director of the Stud at Pin. My first care was to talk to him about this poor animal, and he went with me to see her. After careful examination, we resolved to try to cure her, although we very much despaired of the result. We passed a ligature round the portion of the bladder inferior to the orifices of the ureters, and charged the proprietor to tighten the ligature from time to time. Gruel only was allowed, and occasional injections thrown up. M. Diquet returned to Pin, and I was left in charge of the patient.

30th.—A messenger came to inform me that she was much worse—that she had violent colic, and was sadly beating herself about. I hastened to her, and found that the ligature had risen more than an inch, and had closed the orifices of the ureters. It was the stoppage of the urine in these canals which produced the apparent colicky pains. The bladder being eight inches in diameter inferiorly, was of a pyramidal form, pointing upwards; and this had caused the difficulty of keeping the ligature in its place. In order to accomplish this, I fixed two nooses to the ligature, and which I made to pass under the middle of the bladder. Every day I tightened the first ligature, and then that beneath, until there remained nothing more than a little pedicle, to which was attached a mass six pounds in weight, and exhaling a most infectious odour. I cut through this without any hæmorrhage. There was immediately a retraction of the



superior part as far as the meatus urinarius, and to so great a degree, that the vulva completely closed, and there remained externally no trace of the mischief that had been done; except that the urine, running incessantly through the ureters, collected in small quantities in the vulva, and was often ejected, and ran down the thighs and excoriated them more and more.

At this period I again saw M. Diquet. I told him what had occurred since our last interview, and we determined to make a kind of gutter of tin, mounted on wire, and fixed to the inferior commissure of the lips of the vulva by means of the wire, retained by two cross pieces, as if it had been buckled, and, the mare being docked, the tail did not derange the mechanism of the gutter. By these means the urine was thrown beyond the thighs and hocks, and the state of irritation in which these parts had been was allayed by the application of a few emollients. Six weeks after the accident the mare was again put to work.

This history is, perhaps, more curious than useful, on account of the rareness of its occurrence. It proves, however, that we should never despair, let the case be of the severest character, or the life of the animal apparently compromised. One thing is of the greatest importance, —to know when and how the bladder can be reversed.

The proprietor perceived it even before the birth of the colt; but he was ignorant how long the mare had been suffering before his arrival. The long and violent efforts to which she had abandoned herself while the colt had its fore-legs against the rectum—might not these have been the cause of the inversion? This appears to me probable, since the hind-legs had not yet been brought forward.

*Mém. de la Soc. Vét. du Calvados I, 1830.*

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## ROYAL AND CENTRAL SOCIETY OF AGRICULTURE.

A REPORT OF THE MEETING FOR THE RECEPTION AND CONSIDERATION OF MEMOIRS AND OBSERVATIONS ON PRACTICAL VETERINARY MEDICINE.

*Commissioners, MM. GIRARD, HUZARD, and YVART;*

*M. BARTHÉLEMY, Reporter.*

[Continued from page 417.]

M. DROUARD, veterinary surgeon at Montbard (Côte d'Or), who received a gold medal from this Society in 1837, addressed a collection of thirteen cases, almost all of which are very interesting.

The two first relate to sheep-pox. In one of them M. Drou-

ard points out the mischief which has been occasioned in a flock by inoculation for sheep-pox. He speaks of those gangrenous tumours which used to be so often met with, and which were generally supposed to be caused by the punctures having been made too deep : it appears, however, to be his opinion, that the warm moist state of the atmosphere had most to do with their production in the cases which he is narrating, the animals having been inoculated about the latter end of August. The other relates to the transmission of sheep-pox to the fœtus, by the inoculation of the mother during the latter part of the term of gestation. M. Drouard believes in the possibility of this transmission, and recites two cases which, it appears, came under his personal notice, and which are quite sufficient to dissipate all doubts on the subject.

The following is one of these cases : eighty ewes with young were inoculated in December, sixty-eight of which took the sheep-pox. After the lambing season, all the lambs were inoculated. Two shewed symptoms of the disease, and these were recognized by the shepherd as being the offspring of two ewes on whom the inoculation took no effect.

The next paper is upon *the use of the leaves and stubble of buck-wheat, and the disorders occasioned by it in sheep.*

The disorder here alluded to broke out suddenly among a flock that was grazing on a piece of ground that had borne a crop of buck-wheat (*polygonum fagopyrum*), and attacked about one-third of them. The prevailing symptoms were incessant restlessness and impatience, which caused the animals to run their heads against every surrounding object, and to rub their noses either against these objects or the ground, or against their fore legs. The whole of the head swelled to such a degree as to cause absolute deformity ; but, subsequently, all these symptoms disappeared as suddenly as they had arisen.

M. Drouard is led to attribute this affection to the stubble of the buck-wheat, from the circumstance that of the three flocks which were pastured on the piece of land in question, the disorder broke out in but one, and that was composed of ewes that had been fed on wheat-straw and the stubble of buck-wheat for five weeks before they were turned into this ground, and thus had become predisposed to take on the disease, which the other flocks were not.

Under the title of *unnatural parturition*, we find four cases highly interesting, as well from the seriousness of the complications which presented themselves, as from the nature of the means which were had recourse to in order to accomplish the birth. In three cases M. Drouard found himself compelled to have recourse to embryotomy, and the fœtuses were extricated from the womb

piece-meal. The mothers did well. In one of these cases, besides the obstacles to parturition resulting from the unnatural position of the foetus, the tail and hinder parts of which presented themselves, M. Drouard had also to contend with those caused by a considerable hydrocephalus, which opposed the passage of the head across the pelvis. The fourth case afforded an instance of the passage of the foetus through the coats of the abdomen. A sheep that had arrived at the period of gestation several days before, made repeated and fruitless efforts to expel the lamb. These efforts suddenly ceased, and for about a month the animal appeared to be quite well. At the end of this time symptoms of indisposition were observable—an œdematous swelling formed around the umbilicus and the skin wrinkled up, and allowed the wool of the foetus to become perceptible. The opening was enlarged, and the lamb extracted from the abdomen—a suture was then passed, and properly dressed. Complications succeeded, which were successfully treated, and the animal was cured. This case is certainly one of the most extraordinary ever met with in the annals of veterinary surgery.

M. Drouard is a very clever, well-informed veterinarian—a scientific practitioner, and one who has shewn great zeal in contributing to the progress of science; your commissioners propose that a copy of “the Theatre of Agriculture,” of Oliver de Serres should be presented to him.

M. Jacquot, Professor of veterinary medicine to the Hospital at St. Dié (Vosges), has forwarded a manuscript, the intention of which is, to use his own words, *to direct attention to the benefits that may be derived from the use of soda as an accessory to the ordinary diet of our most useful domesticated animals.*

“From time immemorial, it has been remarked,” says M. Jacquot, “that herbivorous animals, living on plants grown on soils impregnated with salt, are always most healthy, and hence it has been deemed advisable to mingle a small portion of salt with their food; but it is soda and not salt which these plants contain, which is a valuable substance, and that, in ordinary localities only enters into the composition of plants in almost inappreciable quantities.

M. Jacquot relates, that for about the last six years he has entered into a series of experiments on a small flock of merinos belonging to him, and which used formerly to be sadly devastated by the rot, turnsick, cutaneous diseases, &c.: that he has placed these animals in situations the most unfavourable to health and has pastured them on damp moist meadow land; but has at the same time given to each sheep from six to nine grains of soda per day, mixed with a little oats, and that, for the last



four years, his flock has been in excellent health and condition, all disease has disappeared from among them, and their wool has become finer and better in quality and more abundant. Similar and equal beneficial advantages have been derived from the use of soda in a flock belonging to one of his friends.

M. Blavette, veterinary surgeon at Bayeuse (Calvados), and member of the Veterinary Society of Calvados and la Manche, is the author of a work, entitled "*An Essay on Articular Wounds followed by the escape of the Synovia, in Horses.*"

M. Blavette divides articular wounds into two classes: 1st, wounds of the knee, the thigh, and of those articulations situated above these parts; 2d, wounds of the fetlock, and the articulations lower down. Those appertaining to the first class are much more dangerous than the others, because it is almost impossible to arrange and maintain any bandage around the wounded parts, and consequently to make use of the proper dressings. M. Blavette condemns the use of emollients in the treatment of this kind of wounds, and we perfectly agree with him, because that class of drugs has too great a tendency to relax the white tissues, and he recommends tonics and restrictives, to which he subjoins antispasmodics when the pain is very great. In order to justify a preference of a mode of treatment which may appear to repel the inflammation of the parts, M. Blavette states, that he has seen an application made use of in Spain for the reduction of inflammatory tumours produced by external violence, composed of mercurial ointment, cantharides, scarabæi, and hellebore. If this gentleman had nothing but the authority of similar facts wherewith to support the doctrine which he wishes to introduce, there is reason to believe that he would make but few proselytes; but he has recourse to much more conclusive arguments, which are ten cases of articular wounds.

The remedy which Mr. Blavette prefers, and which has always been used by him with great success, is as follows:—

Sulphate of zinc.....	32	} Reduced to a fine powder,
Sulphate of alumine.....	64	
Camphor.....	16	

dissolved in a sufficient quantity of olive oil, and the whole mixed and beaten up in half a pint of common water. It is applied to the wound with a feather, and the bandage is moistened with it frequently in the course of the day. The diet, bleedings, and other course of treatment must depend upon the symptoms manifested by the patient. When the wound is situated in a place on which it is impossible to keep a bandage it should be bathed frequently with this preparation, and the part never allowed to get dry. A solution of equal portions of sulphate of iron and

sulphate of zinc has also been frequently found very successful in cases of the latter description.

We have received from M. Loiset, Veterinary Surgeon to the Northern Department, a voluminous manuscript entitled "*Hygroma*," and sero-synovial bursæ in domesticated animals.

This work is divided into two parts: in the first the author treats of the *sero-synovial tissue*, or of *serous bursæ in general*. These bursæ, the coats of which are very thin and of a serous character, constitute little vesicles, kinds of bags closed up on every side, which are found in the midst of an abundant cellular tissue between those parts which exercise the greatest degree of motion on each other, and their intention is to diminish the friction. After some luminous considerations with regard to these organs, taken collectively, and of which few anatomists have hitherto spoken, the author proceeds to indicate their position, and the mode of discovering them by dissection. He then enters into a minute description of each of these bursæ; after having divided them into bursæ of the trunk and bursæ of the limbs, and subdivided them as attached to the anterior and posterior limbs, pointing out to which of them each belongs. The number of serous bursæ which he describes are twenty-four, the principal of which, considering the frequency and dangerous character of the diseases of which he supposes them to be the seat, are the atloïdean, the dorso-spinalis, the prérotulienne, and the olecranienne.

The second part treats of hygroma. This affection consists in dropsy of the sero-synovial bursæ. M. Loiset commences by giving a general sketch of this disease: he then offers a detailed description of all its characters, relates those complications which tend to aggravate it, the transformations which it undergoes, and the differences which distinguish it from phlegmon, cystitis, &c.

M. Loiset subsequently proceeds to give an account of hygroma, considered with reference to each of the sero-synovial bursæ, and he furnishes examples of each of these affections derived from his practical experience; the number of these cases amounts to twenty-four.

When treating of hygroma of the atloïdean bursæ, of which he gives a drawing, the author adds an excellent description of that disease, which is usually known by the name of poll-evil, which he makes to consist primitively and exclusively in this species of affection. The course of treatment which he recommends is one of the best that could be pursued, and he adheres strictly to the surgical proceeding that has been taught in our schools. This article alone extends through not less than forty-



five folio pages, and terminates the manuscript. M. Loiset was not able to finish his work on account of the near approach of the concours; but, in order to give us some idea of what will be its importance when finished, the author has subjoined a list of all the subjects on which he proposes to treat. These will, it appears, amount to seventeen, and the cases by which they will be illustrated increase that number to sixty.

Although this work is incomplete, it is exceedingly valuable, and contains some highly interesting and novel views and opinions.

M. Berger, Veterinary Surgeon to the 3d Regiment of Dragoons, had addressed a manuscript of three hundred folio pages, entitled "*On Glanders and Farcy in Troop Horses.*"

This important Essay is divided into eight chapters, the contents of all of which are summed up in the conclusion.

In the first chapter M. Berger admits that glanders was known to the ancients, and finds proofs of this in the translations of the Greek hippiatrists, and in the writings of Vegetius. On reaching the age of Louis XIV, he passes successively in review all the various works which have appeared on this subject, from that of Sollysel to the present day.

The author divides glanders into two varieties, *chronic* and *acute*. The former is subdivided into *common chronic glanders*, properly so called, which he likewise designates humid glanders, and which may be either primitive or secondary; and into *dry glanders*, which is almost invariably primitive in the organization, and which appears spontaneously. Acute glanders is subdivided into "acute glanders, improperly so called," which is neither more nor less than the termination of an attack of chronic glanders; and into "spontaneous acute glanders," which may be either primitive or secondary. Acute glanders receives the name of acute glanders properly so called and gangrenous coryza, or contagious affection of the head, according to the appearances which it puts on.

Farcy, like glanders, is either acute or chronic: the former may either be slight or dangerous; the latter is invariably a serious matter. M. Berger, in common with many other veterinarians, is of opinion that glanders and farcy are identical. According to him, it is not the solids alone that are altered by this affection, for that which is termed a *disgregation* of the constituent principles of the animal fluids is constantly met with;—principles, the proportions of which become more and more abnormal, according to the duration of the disease or the rapidity of its inroads. This evil appears to consist in a predominance of the plastic portion over the serum and the cruor of the blood. This lowering of the quality of the blood favours also the deve-



lopment of glanders, but it then appears under a chronic form. After some general considerations respecting farcy, the author proceeds to describe the symptoms and organic lesions which characterise each variety of glanders.

Chapter 5th describes the *treatment*.

In the history of any disease the treatment of it is always the most important part, for the end which all wish to attain is to effect a cure. M. Berger is not in this respect any further advanced than his brethren; but, more modest and candid than many of them, he frankly confesses his inability to point out any mode of treatment, by means of which all the varieties of glanders and farcy may be conquered. He can, like many other veterinary surgeons, cite several cases of a perfect cure being effected, but none of these have been the result of any specific course of treatment. It appears to us that the author attaches too great an importance to the disappearance of the glands of the throat. With regard to the treatment of farcy, he particularly recommends cauterization, and, above all, extirpation of the buds, the cords, and farcy tumours. This is coming back to Chabert's practice. After these violent remedies, he would have recourse to various medicaments, as that of *Terrat*, and the ointment of Lebas, and the common blister ointment, &c.

Chapter the 6th treats of *contagion*.

In this chapter, a great part of which is composed of cases extracted from the works of MM. Dupuy, Delafond, and Leblanc, M. Berger, in the first place, discusses the contagiousness of chronic glanders and farcy. He passes in review all that the French authors have written on this subject—states their various opinions, the observations they have collected—the experiments they have made—remarks on the value of their records, and, after all, speaks of them as one who does not believe in contagion. He concludes by narrating several cases that have come under his personal knowledge, and that tend to support the opinion which he entertains.

He next proceeds to enter into the same question as it relates to acute glanders and farcy, commencing with that intermediate form of the disease which constitutes the termination of chronic glanders. This portion of the work, as well as that relating to the contagiousness of acute glanders, properly so called, is only a repetition of what M. Delafond has already published on the same subject. As to the contagiousness of gangrenous glanders, M. Berger is of opinion that there is much yet to be learned on that point.

The author then proceeds to enter upon that most important question, *the contagiousness of glanders as regards the human race*, or whether it can be communicated from the horse to the man.

Without absolutely denying the possibility of such a thing, he states, that he has great difficulty in giving credit to its existence. His doubts are founded on an experience of twelve years, during which period he has seen more than twelve hundred glandered horses that were cleaned, and groomed, and looked after by as many soldiers,—he opened at least six hundred of them, and both himself and the assistant farriers have remained for hours, in all degrees of temperature, with their hands covered with portions of those organs which had undergone alteration, without meeting with one single case of the transmission of glanders or farcy from the horse to the human being. But, although he is doubtful with regard to this point, he appears to be fully convinced that this disease may be spontaneously developed. He believes it quite possible that man may occasionally be placed in relative positions, analogous to those which give birth to this affection in the horse.

Chapter the 7th.—“*Means which may be employed for the prevention of glanders, farcy, and other diseases of a similar nature.*”

This chapter contains a very clever account of all the hygienic rules which should be followed, the precautions which should be taken, and the means which should be employed for the prevention of the development of glanders and farcy in a cavalry regiment. M. Berger speaks, first, of the troop horses, and then of the young horses, and enters largely into the subject of the proper food and stabling adapted for them. In order to mark the importance which ought to be attached to a strict observance of hygienic regulations in the treatment of troop horses, the author inserts an extract from a report made to the minister of war by a commission, composed of the highest military functionaries, surgeons, and veterinary surgeons, on *the losses occasioned by glanders*. It appears from the calculations made in this report, that from the revolution in July to the 31st of December 1836, the army lost 3,132 horses from glanders every year, the value of which would amount to 1,740,610 francs.

Chapter 8th.—“*The identity of various diseases with glanders and farcy.*”

The diseases which the author compares to glanders or farcy are tubercular phthisis, scrofula, scorbutic and scrofulous and scabby and carcinomatous ulcers, cancers, scurfy ulcers, scurvy, sciatica, rachitis, wens, white tumours, &c.

This paper of M. Berger's is the most complete work on glanders and farcy which we possess. It is true, that every thing contained in the voluminous manuscript does not emanate from him, but that he has borrowed numerous portions, yet, taking into account simply those parts which are his own, it is a very superior work, and could only have been written by a talented and industrious man.

M. Pepin, second veterinary surgeon to the fourth regiment of artillery, has forwarded a manuscript containing two essays, the one on the mineral waters of Barèges, and the other on the horses belonging to the valley in which that village is situated. M. Pepin narrates two cases of glanders, both of which, he asserts, were cured in 1840, by the animals being suffered to drink nothing but water taken from those springs, and the temperature of which was  $26^{\circ}$  ( $79^{\circ}$  Fah.) The author minutely describes all the changes which were perceptible in the symptoms of disease during the course of treatment, which was begun in the early part of June. In one month the animals were considered to be convalescent, and returned to their work, and M. Pepin being compelled to leave Barèges, saw no more of them: but in one of the four certificates which are attached to this manuscript, M. le docteur Ballard, head surgeon to the military hospital at Bourdeaux, who assisted in the attendance on these two cases, and who remained at Barèges until the 1st of October, states that he frequently saw these two mares gallop up the steep road which leads from Luy to Barèges; that he examined their nostrils, and was unable to perceive the slightest abnormal fluxion.

Four certificates, drawn up with all the formalities necessary to prove their authenticity, attest the truth of the cases narrated by M. Pepin.

In a letter accompanying his work, this gentleman informs the society, that the essay which he forwarded last year was also sent to the minister of war, with a request that the means and authority might be granted to enable him to carry on his experiments on a large scale, in order that the results may become still more conclusive. His request was granted, and M. Pepin received an order to proceed from Douay to Barèges, and to experiment on all the glandered horses furnished by the garrisons of Auch and Tarbes. All preparations were made, all orders given, all local arrangements completed, and M. Pepin was at his post, when a sudden and unlooked-for opposition, which it was impossible to overcome, prevented his intended experiments. This opposition was conducted by the inspector of the waters, who pretended that the horses brought there to be experimented on would bring glanders into the valley, where they asserted, but falsely, that it was unknown. To this it was added, that the fear of glanders would drive away all the bathers. M. Pepin in vain endeavoured to convince him that the arrangements he had made were such as would prevent the animals under experiment from coming in contact with any others, and, to do away with the fear respecting the transmission of glanders from the horse to the human being, he offered to sleep in the stables which contained the patients during the whole period they were experimented on.



The inspector was inflexible, and, after a six weeks' sojourn at Barèges, M. Pepin received an order to rejoin his regiment.

A manuscript, numbered 14, and the name of the author of which is enclosed in a sealed envelope, is entitled, "On the medicinal Use of the Mineral Waters of Bôurbonne les Bains on Horses, and the Advantages with which the Establishment of a Veterinary Infirmary there would be attended."

M. Mariot, veterinary surgeon to the third regiment of cuirassiers, is the author of this paper.

The author commences by recounting the researches which he made in order to become thoroughly acquainted with the medicinal properties of these springs, and to learn if they had ever been made use of in the treatment of the diseases of animals. He found but little information on this point, either in the ancient or modern works published on the subject; but when he came to the information derived from private individuals, he was more successful. M. Bèzes, who was apothecary-major to the military hospital for thirty years, told him, that a horse dealer had speculated for a long time in lame horses, which he cured by pumping upon them; and also in glandered horses, thirty of which he professed to have cured by means of these mineral waters.

He then proceeds to relate four cases, which tend to prove the efficacy of these waters in the treatment of sundry diseases of the horse. The subject of the first of these is a mare that had been declared to be incurably glandered by several veterinary surgeons, and was condemned to be destroyed. The author obtains a reprieve—the animal is given over to his care, and submitted to the action of the mineral waters, used as drinks, injections up the nostrils, vapour and shower-baths. The lacrymal sinus, in which a purulent deposit exists, was trepanned, and at the end of forty days the animal, after undergoing two strict examinations—the one judicatory, the other administrative—was declared to be perfectly cured, and delivered over to its owner.

The second case relates to a stallion, that had been condemned by the veterinary surgeon of the district, as well as by the author himself, as glandered, and ordered to be destroyed. This animal had been treated during eleven months for supposed chronic nasal catarrh. It belonged to government, and the order for destroying it was not given for nearly two months after the animal had been condemned. Advantage was taken of this delay, and the animal submitted to a similar course of treatment to that already described in the first case. When the order did arrive, a reprieve was obtained, and on the fifty-fifth day the stallion was declared to be perfectly cured, and the order for its death was revoked. The animal was afterwards made use of as a stallion.

The third case is of a horse attacked by a cancerous affection of the testicle, for which he was castrated; but within twelve days after the operation a farcy cord made its appearance in the subcutaneous thoracic vein. *It was fancied that a slight enlargement of the sublingual lymphatic ganglions could be perceived, and an increase of the mucous secretion of the nasal cavities.* The farcy buds were cauterized, the mineral waters used as in the preceding cases; and, on the thirtieth day, the animal was perfectly cured, and has continued capable of hard work for the last two years.

The fourth case does not relate to glanders, but a lameness that had existed for two years without any apparent cause, and which the veterinary surgeons of Nancy, Epinal, and Reminemont, had vainly endeavoured to cure. The animal underwent the following course of treatment:—Poultices were placed round the foot, composed of the sediment of the water taken from the bottom of the well, and applied hot; and a considerable quantity of the mineral water, at a temperature of twenty degrees (68° Fah.), was thrown on to the whole length of the diseased limb, by means of a syringe. After this treatment had been continued for twenty days the lameness ceased; nevertheless, the same course was pursued for fifteen days more, when a complete cure was effected.

The cases of which we have thus given a sketch are succeeded by an account of the topography and statistics of Bourbonne les Bains, and of the quality and powers of the water furnished by the different springs, as well as of the sediment. The author treats of the physical, chemical, and medical properties of both the water and the sediment. He subsequently endeavours physiologically to explain the beneficial effects which he has obtained from the use of them in the treatment of the animals mentioned in the foregoing cases; and concludes his manuscript by proving that, from the quantity of water which is wasted, it would be easy to establish a veterinary infirmary at Bourbonne without injuring the establishments already existing there.

This Essay is highly interesting, and the facts which it relates are valuable in a scientific point of view. The author, be he what he may, is, evidently, a persevering man, who deserves encouragement.

M. Riquet, veterinary surgeon to the 7th regiment of dragoons, and Chevalier of the Legion of Honour, has invented a modification of the present mode of shoeing horses. This is described in a paper, entitled "*An Account of a Pedometrical Method of Shoeing Horses, both in the Open Air or in the Stable.*"

The present mode of shoeing horses has long been a subject of complaint; and among the number of reproaches brought against it, that of applying the shoe hot to the foot appears to be one of the greatest. This application, if performed by a clumsy



or careless workman, is frequently the cause of very serious accidents, and even under ordinary circumstances, and when performed with all possible care and skill, it is considered as a cause of the deterioration and deformation of the foot, and, consequently, depreciates the value of the horse, who becomes less sure-footed, and, too often, lame. Cold shoeing, therefore, that is to say, without the application of hot iron to the foot, is highly to be recommended; but it is a very difficult operation, and requires great nicety. The time also which it takes, and the care which it requires, is contrary to the habits of the forge and unpleasant to the workmen, who find it easier to attack the foot and fashion it to the shoe, than to fit the shoe to the foot; and, consequently, the part which ought to be protected by the shoe is sacrificed to it.

M. Riquet's object is to prevent the serious inconveniences to which we have just alluded; and he hopes to be able to do this by means of an instrument which he calls a *pedometer*. This instrument is composed of oval plates of iron or copper, of about three centimetres ( $\frac{39}{100}$ ths) in length, and fastened together in a manner somewhat similar to that in which the pieces composing a watch chain are united: these plates move over each other in such a manner, that by means of the instrument which results from their union the shape of the foot can be represented without difficulty. It is made use of in the following manner:—the shoe is taken off, and the foot prepared in the usual way. When it is ready to receive the new shoe, the farrier applies the pedometer to the foot, and takes its exact shape. He then carries this instrument to the forge, and applies the hot iron to it as often as he deems necessary without doing any harm; and when he thinks the shoe is made of the proper shape, he takes it to the horse and attaches it to the foot.

In order to prevent the loss of time which would be occasioned when the horse is to be shod at the stable, by the farrier having to come there twice, first to take off the shoe, pare out the foot, and ascertain its size and shape, and then to put on the new shoe, M. Riquet proposes that in every forge a register shall be kept, on the leaves of which shall be an impression of the feet of every horse properly pared; the size and form of the feet to be shod can be taken from this impression by means of the pedometer, and the shoes adjusted to it before the farrier goes to the stable.

This, gentlemen, is the pedometrical mode of shoeing horses; and it must be admitted that the idea is good, and the invention very ingenious. It must be confessed, however, that it cannot be considered as perfect; nevertheless it is one step taken towards a very considerable improvement, and the author would have obtained a patent if he had not caused his work to be printed since addressing this manuscript to the board.



The manuscript numbered 15 bears this motto, taken from Boileaux—

Aujourd'hui, toutefois, mon zèle m'encourage,  
Il faut au moins du Rhin tenter l'heureux passage ;  
Un trop juste devoir veut que nous l'essayons.

The motto is repeated in a sealed letter, which encloses the name of the author (M. Imlin, veterinary surgeon at Strasburg).

The manuscript is entitled, “ *The social Position of Civil and Military Veterinary Surgeons in the principal German States.* ”

“ An opinion generally prevails among French veterinarians,” says the author, “ that their brethren beyond the Rhine hold a more elevated position in society than they do, although the German veterinary surgeons are far less carefully educated than the French. This circumstance has always been much insisted upon by those who have endeavoured to obtain for military veterinarians a rank better fitted to the degree of instruction which they possess, and the importance of the services which they render to the state.” This opinion the author asserts to be an error, for, says he, “ the first general rule in all the German states is, that the veterinary surgeons, whether civil or military, shall be under the direction of the human surgeons ; 2d, there are two classes of veterinary surgeons, the one composed of highly educated scientific men, and the other of those who have merely received a practical education, and who are little better than empirics ; 3d, the social position of veterinary surgeons is not in accordance with the perfect or imperfect organization of the schools, or with the amount of the instruction they are capable of affording ; 4th, in those places where civil veterinary surgeons are most favoured, military veterinarians are least thought of, and *vice versa* ; 5th, the immense number of veterinary schools in the smaller states favours an imperfect system of instruction, and constitutes an obstacle to the progress of veterinary medicine.”

In Austria the offices of professor to the Veterinary Institution at Vienna, and veterinary surgeon to the province, are bestowed on human surgeons, who have attended a course of veterinary medicine. In Austria, Prussia, Bavaria, Saxony, and especially in the petty German states, the veterinary surgeons to the province, the district, the town, &c. are all under the control of the surgeons and physicians of those places. Not only are they beneath them in rank, but they are compelled to obey them in all that relates to the treatment of epizootic diseases.

If in Bavaria, in Wurtemberg, and in the duchies of Baden and Hessa, where there are but few military veterinary surgeons, these men are ranked as lieutenants, captains, or even lieutenant-colonels ; on the other hand, in Austria and Prussia, where there are greater numbers, they only rank in the former with a brigadier or quarter-master, and in the latter with a trumpeter.

The author gives a detailed description of all the veterinary institutions of Austria, Prussia, Bavaria, Saxony, Wurtemberg, the two Hessias, and the duchies of Baden, Nassau, and Hanover, under their respective titles. He speaks also of the medical institutions of each of these places, and treats his subject as a man who perfectly understands it, and who derives his information from the purest sources. He commences each article by giving a general account of the medical organization; he then goes on to consider the veterinary portions of the corps, and to point out the links which bind it to, and keep it under the control of, the medical body. He describes, in the first place, the established distinction between the pupils that are admitted, the duration of the sessions of study, and the classification of the students according to the number and nature of the courses which they have attended. He likewise narrates all that concerns civil veterinary surgeons; the rank which they occupy, the privileges which they enjoy, the functions which they perform, the obligations which are imposed on them, the appointments which they receive in those states where they are employed by government—all are successively pointed out; and he concludes by a similar investigation of the position and duties of military veterinary surgeons, and, when necessary, refers to the code of law by which these matters are regulated. This paper is terminated by a table of the medical tax imposed upon veterinary surgeons in the duchies of Baden, Hesse, and Nassau, and in the city of Wurtemberg.

This manuscript is very well written. The compilation of the matter contained in it must have required long and diligent research, which could only have been successfully undertaken by a person well acquainted with the German language. The materials of which it is composed are arranged in a simple and lucid manner. His essay is a valuable acquisition to the annals of science.

Such, gentlemen, continues the reporter, are the various works which it has been our duty to peruse and give our opinion respecting. Your commissioners have attentively read them all, and, after having deliberated on each of them, have the honour of recommending to you that the following rewards be granted:—

1. Honourable mention to M. Raynal.
2. Silver medals to MM. Berger, Elèouet, and Loiset.
3. Copies of the Theatre of Agriculture, by Oliver Serres, to M. Drouard, and the author of the work on the German Veterinary Institutions (M. Imlin).
4. A gold medal, with the head of Oliver de Serres, to M. Pepin, and the author of the paper on the medicinal properties of the waters of Bourbonne les Bains (M. Mariot).

*Recueil de Médecine Vétérinaire, July 1841, p. 428.*

THE  
VETERINARIAN.

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VOL. XIV, No. 165.] SEPTEMBER 1841. [New Series, No. 105

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ON THE UNILATERAL OR THREE-QUARTERED  
SHOE.

*By E. GABRIEL, Esq., M.R.C.S. et V.S, London.*

THE most valuable improvement that has been made in the art of shoeing in modern times is most undoubtedly that of unilateral nailing, introduced by James Turner. The principle of the thing is good, the practice is good, and, as a matter of course, the result is most valuable. The principle, however, has not yet been carried out to its full extent, and the object of this paper is to shew the great desirability that it should be, the great facility with which it can be done, and the important advantages to be derived therefrom.

I often have been, and I am by no means sure that I am not at this moment, doubtful whether it is of any consequence at all as to the manner in which horses are shod. I have seen every contradiction of principle so elaborately worked out, every means which human stupidity could adopt to lame animals so sedulously adopted, every care so magnanimously disregarded, and every carelessness of detail and unfinished coarseness of workmanship so recklessly acted on, and all this too backed up by the horses themselves, as shewn by their working soundly during the entire periods of their existence, that I could with all my heart sit down and exclaim, in the style of old Bardolph, "A fig for your improvements."

In sober seriousness, however, the fact is so, both, be it remembered, in town and country; and I am perfectly satisfied that two-thirds of the horses now in work are shod with the most utter disregard to principle and indifference to workmanship that the veriest anti-diffusionist of knowledge could desire. True, there are plenty of cripples, rather a strong minority perhaps, as they would say in the house; but still they are a minority, and when we come to deduct from them, as I strongly suspect we



must do, the considerable number operated on by "careful smiths, on the most approved principles," at veterinary establishments, guiltless of the presence of veterinary surgeons, and "veterinary forges," the owners of which, eschewing the superfluity of letters, and scorning to be of the accommodating humour in Bombastes, "long cut or short cut, 'tis all the same to me," decidedly prefer short cut, as I noticed a few weeks ago splendidly emblazoned in front of a forge in town; but then over the entrances hung golden shoes so tempting that if horses were not taken there to be shod I much doubt if they would not go themselves—why this deduction may, like some other tails, very probably turn tail, and prove ultra-innovationists, strengthen the argument against the improved systems, and have the rough unwashed (and any of the washed?) to laugh at the fallibility of human improvements.

How is all this? I apprehend it is to be traced to one of these two causes: first, the principle, when correct, has not been sufficiently carried out; or, secondly, it has been attempted to be carried out by methods not within the compass of the generality of working smiths. I believe many plans have been brought before the public, the which, if their projectors could personally carry them into practice, would prove advantageous, but which require too much care and skill to be carried out by his workmen; and this is a fact that should always be borne in mind, for we have no right to expect the skill which distinguishes the workers in gold and the workers in silver in the artificers employed in our forges: simplicity of detail is therefore an essential ingredient in any plan we may offer to improve the system of shoeing, and this is eminently the case with the unilateral method of nailing—any workman can carry it out, and therefore the public have been benefited by it.

Valuable as this method is, however, it has not produced all the good which the principle on which it is founded is capable of producing; and this I attribute to the first cause mentioned, namely, that principle not being fully carried out. I have now for some time gone one step farther. Instead of unilaterally nailing the common shoe, I use an unilateral shoe—precisely so far as the nails were carried round the inside quarter, so far I carry the shoe, letting it there terminate in a rounded bevelled edge.

Now, I am not going to smother this extra step of mine in my own modesty, and bashfully disclaim, either for it or myself, any merit that may be due, but declare at once that I think it a most important step,—one that will overtake and conquer all corns, thrushes, sandcracks, contractions and navicular—no, I am not sure about navicular cases, and yet I have a good mind to throw

them in, particularly if they are not so far advanced that no one step short of a seven-leagued boot can overtake them. As a remedy for cutting, the value of the three-quarter shoe has long been known; and I believe that in every case where the opposite plan of thickening the inside hoof fails, this will succeed. For hunting, I anticipate the most important results: from its superior safety, its lessened chance of coming off, its prevention of slipping, and the ease with which the foot can be raised from ploughed or heavy ground, will, I doubt not, ensure its universal adoption. This however remains to be tried. I do really think, therefore, that it is the *ne plus ultra*, the acme of perfection in the art and mystery of horse shoeing.

As to the originality of this step in the march of improvement, I am afraid that the less said the better; for I have a sort of undefined dread hovering over me of having seen something about it somewhere; however, I shall not try to see it, nor shall I refer to James Turner's paper, nor any body else's paper, fearing I may there read something like my own ideas. I therefore at once acknowledge that I do not recollect, nor will I try to recollect, any thing that any body has said, sung or written on the subject, and so I shall "leave myself alone in my glory."

The only "untoward events" I have met with are, being obliged to give it up in two cases, and have recourse to felt shoes and leathers, and in meeting with an anticipation, which happened thus: I had occasion to wait some little time at a coachmaker's in Stoke Newington, while a false step was being replaced to my chaise, when a respectable old man, a retired smith, came into the yard—a *retired* shoeing smith remember. Of course, we had a little professional chat. I asked him if he did not use to doctor a little as well as shoe? "No," he replied; "I know nothing about it, and never pretended to it, for I had as much work as I could do without it." He was no theorist therefore; for what theorist ever made a fortune in this world, however clever he might be? He may, indeed, have laid the foundation for another man's fortune, but as to making his own—bah! Well, in the fulness of my heart I could not help telling him of my important step. "Yes, sir," was his reply; "it is a very good one, and particularly for *flat feet*; it gets the heels up so strong. It is now about twelve years ago that I recommended a gentleman, whose horse had large flat feet, and was always going lame, to have him shod with three-quarter shoes; he agreed to it, and I shod him so up to the time of my giving up business, and he never went lame after." I'll be hanged if I knew whether to laugh or cry, to be pleased or vexed with this desperate forestaller, who

had not only taken the step I was taking, but had taken it with such a desperate stride, that he had walked into cases I never thought of; so that, if there were no written documents to refer to, I was at once convicted of non-originality, or as a sailor would say, of "catching a crab."

It is now more than a twelvemonth since I commenced this mode of shoeing. The first subject was a light post mare, with two of the worst corns I ever saw. She had been shod with bar shoes and leathers the preceding two years, and, in spite of every care that could be taken, was almost constantly lame. I at once left off the bar shoes and leathers, and put on a pair of unilateral shoes, paring the parts of the feet to be covered by the shoe, but leaving the inside quarter untouched. The shoes and nails were precisely the same as would have been else used with the inside thirds cut off and the ends rounded and bevelled away. She never went lame from the day she was so shod to the day of her death, which was occasioned by an accident nine months after. "On this hint I worked," and with the exception of the two cases before alluded to, where the heels were weak and the soles thin, but which I am persuaded would have done with a little more time, I have not met with a single annoyance. Posters, staggers, carters, hacks, and chaise horses have been subjected to the same process since, and all with uniform success.

Oh, but the crust will break away, the heel will be worn thin, the foot will become tender, and the horse will be lame. Will he? If you want to see a brittled-crust, thin-heeled, thrushy-frogged foot converted into one with a tough, elastic crust, a firm springy heel, and a frog like a piece of India-rubber, shoe with the three-quarter shoe, and I will answer for the transformation. The growth of horn on the exposed part of the foot is extraordinary, for, in the course of a single shoeing the sole will not only not be worn thin, but have become so thick and firm, that more horn might be removed therefrom than from that part of the foot protected by the shoe. I merely, however, leave it level with the crust. The outside heel should be kept rather low, to allow for the thickness of the shoe, and the heels opened or not, as may be considered most desirable. In old horses I have them well opened, but in young ones I allow them to remain undisturbed: in either case the paring of the frog should be limited to its being cleared from "shreds and patches." I am not aware that there are any other directions necessary, nor are any precautions required, with the exception, perhaps, of avoiding, as much as may be, the McAdamized stones, for a day or two, on its first adoption. One circumstance should not be overlooked: in several cases bad



corns in the inside heel have been entirely got rid of; but they have been produced on the outside heel, so much so, as to require some care in preparing that part of the foot.

In point of principle, -- so far as relates to the natural functions of the foot, which natural functions I presume every one understands, or, at any rate, every one pretends to understand, which, doubtless, answers the same purpose—this shoe is most valuable; for whether the most important object be frog-pressure, descent of the sole, expansion of the quarters, or unfettered play for the cartilages—whether it be the one or the other of these, as some assert, or their combined action, as others more rationally maintain, no shoe that has ever been had recourse to admits of their being carried on with such entire freedom as this. Every other shoe, however well applied, encircles the bottom of the foot, subjects it to one uniform artificial pressure—bearing always exactly on the same surface—applied equally to the most elastic and to the more fixed points of support—not allowing one part to catch the weight at one time and another at the other—not relieving the highly elastic inside quarter from pressure for, perhaps, some steps following, and then, when receiving it, admitting of its action with unlimited freedom—bruising, irritating, and, in many cases, entirely altering the structure of the sole at the inner angle of the foot. Every shoe, I repeat, that has ever been used, is liable to all these objections, except the three-quarter one, which having the inner third of the foot perfectly free, and still affording it sufficient protection to enable it to meet all demands made on it, effects “a consummation devoutly to be wished.”

In conclusion, I would say, that I think this system of shoeing may be adopted to a very considerable extent; and should it not be found to do all that may (unreasonably?) be expected of it, or should it, in some few cases, be misapplied, it has this valuable negative advantage, that it can do no possible harm. Should, however, my Stoke Newington ally prove to be right, and his thin flat feet, as well as my narrow strong ones, bear this “shameless exposure,” so that we may at once “put this and that together,” why, then, I should not hesitate a moment in going the “whole hog,” and declaring that of all the shoes wherewith horses are shod, the unilateral, or to speak less learnedly (if one may venture to do so without the fear of our friends and patrons becoming shoeing-smiths as well as horse-doctors) the old three-quarter shoe is, without the chance of exception, the possibility of competition, or the fear of contradiction, the very best shoe with which a horse can be shod. But (and let this be considered as the postscript, in which, as is not uncommon, all that is worth reading is written) having some doubts, or, at any rate, not having any proofs of its

universal applicability, I am content to claim for it the advantage of being applicable in a vast number of cases, in which horses go tender and feeling in common shoes: how far it may prevent, as well as ameliorate, those cases, it remains for a more lengthened experience to decide.

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## ON THE ABSORPTION OF CATARACTS.

*By W. W. COOPER, Esq. Surgeon to the Hon. Artillery Company.*

THERE having been some misapprehension on my part, as to Mr. Cartwright's meaning, in my former communication upon the subject of Non-Absorption of the Capsule of the Crystalline Lens, I am induced to trouble you with a few more remarks upon a subject which is—as every thing relating to so important an organ as the eye must be—highly interesting.

The point in question would appear to be, “whether small cataracts, from the size of a coriander seed downwards, and which are supposed by veterinary surgeons to be capsular, are ever absorbed, and the capsule becomes transparent again.”

These small cataracts are, I presume, partial opacities of the capsule, and are not uncommon in the human subject. I have a case now under my observation which illustrates the point beautifully. In the centre of the pupil of each eye a white spot may be discerned, and upon careful examination this is clearly seen to be an opacity of the capsule of the lens, that body being evidently immediately posterior to it. These opacities have existed for some time, and are slowly but decidedly increasing.

I have never yet observed, although my attention has been directed to the subject, and I have examined a considerable number of cases,—I have never yet observed, in the human subject, a decided opacity of the lenticular capsule to disappear. Instances have come under my notice of lymph being deposited upon the capsule during iritis, and closely resembling in appearance an opacity of that membrane, which lymph has been afterwards absorbed; but these spurious cataracts must not be confounded with the genuine. This leads me to the question “whether lenticular cataracts ever become absorbed in the human subject, leaving the eye transparent.”

Without saying that such an event is impossible, I am not aware of any really well-authenticated case upon record. We certainly hear of remedies to cure cataract without operation, and ever and anon these are stated to have worked wonders; but I fear the cases related will not bear investigation: and the simple fact

that, one after the other, these "remedies" have fallen into disrepute, is the best proof of their inefficacy. In fact, we have yet to learn whether true cataract is capable of being cured by remedial measures without having recourse to operation. I believe that, under certain circumstances, the disease may be retarded by treatment; but I fear that the present state of our knowledge will not honestly carry us beyond this point.

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## GLANDERS IN THE HUMAN SUBJECT.

[From the "Dublin Journal of Medical Science."]

DR. HUTTON said that, as four or five cases of glanders in the human subject had, within a comparatively short period, come under his own notice, or that of the surgeons of the House of Industry, he was anxious briefly to lay them before the society, and also to exhibit a specimen of the disease as it had manifested itself in the lungs of a patient who died about two days before. Previous, however, to entering on this case, he would read the details of another, in which some experiments were made with the view of testing the character of the poison, and ascertaining whether it was glanders or not. One of the results of these was, that an ass, inoculated with matter taken from the patient, was in due course attacked with the disease.

The case was recorded by Mr. Rutherford, one of the resident pupils of the hospital, for whose accuracy Dr. Hutton could vouch.

The patient, a young man, named P. Kelly, aged about twenty, was admitted in Richmond Hospital on the 26th of August 1838. On admission, his face presented that peculiar aspect which is so characteristic of glanders; the left half was very much swollen, tense, and shining, the redness fading away gradually and becoming lost in the surrounding integuments.

Both eyes, but particularly the left eye, were closed from inflammation and œdema of the lids. The left ear was swollen, of a dark red or livid colour, and the patient was quite deaf on that side. The glands of the left side of the jaw and face were enlarged and indurated; and he complained of a feeling of numbness in the whole of that side of the head and face. About an inch and a half in front of the ear there was a large flaccid vesicle. There were also two pustules on the face, one of which had burst and was sloughing. On various parts of the body there were numerous pustules in different states, from the first to the more advanced stages.



In the first stage, the skin in the situation where the vesicle afterwards appeared was of a peculiar pale, whitish appearance. In the next stage the vesicle appeared, not however exactly in the centre of the pale spot, but rather on one side of it. In a more advanced stage it became sero-purulent, then pustular, and, some time afterwards, the pustules began to shrink and become depressed in the centre. The mucous membrane of the mouth was inflamed and covered with a viscid adhesive mucus. The Schneiderian membrane was also inflamed; but there was no discharge of purulent matter from it.

The patient had the ordinary symptoms of irritative fever. His head was very confused, but he had no pain or raving,—his bowels rather free—his urine high-coloured.

He stated that he had always been healthy; and when questioned as to the nature of his occupation, said that he had been employed for the last four months in attending horses which were labouring under glanders. That he had been retained specially for that purpose, and groomed the animals once a day. He did not recollect that he had a wound or sore on either hand; he had not drunk out of any vessel used by the horses, nor had he slept in the stable. He attributed his illness to fatigue after a long journey, and said that the first symptoms he had noticed were pains in his knees, followed by headache. Four days afterwards the left side of the face and head began to swell, with increase of fever and depression of strength.

On the 27th, the day after admission, his symptoms were progressing. The tumefaction of the head and face increased, and several livid vesicles made their appearance, accompanied by severe pain in both jaws. Several more began to shew themselves on the anterior parts of the arms and chest—his pulse became smaller, and rose to 120—his respiration was somewhat suspicious—his breath foetid—and he felt pain when the ends of the long bones were pressed on, in the vicinity of the joints. His head was still confused, but he had no raving. Towards eight o'clock in the afternoon there was a further exacerbation of his symptoms. He made water tolerably well, but did not seem to be aware of passing it. He was ordered to take ten grains of sulphate of quinine three times a-day.

On the 28th the eruption was still extending; his pulse 140, and weak; his thirst excessive, and he raved frequently. At half past 3, P.M., he was restless, and tossing about in bed, with constant involuntary motions of the lower extremities, quick small pulse, and hurried respiration. Twelve new spots had now made their appearance; his fever and delirium were increased; he was passing both urine and fæces involuntarily. There was a dis-

charge of sanious fluid from the left ear, but none from the nostril.

On the 29th a farther exacerbation of symptoms took place. The left elbow joint was swollen and painful—the pustules increased in number and size, and were intermixed with gangrenous bullæ; and, along the internal and anterior parts of the thighs, in the situation of the absorbents, pale rose-coloured swellings began to appear. His breath was foetid, and the odour from his whole body was almost insupportable. He had no discharge from the nostrils, but on examining the nose, Dr. Hutton observed a small ulcer on the left side of the septum narium. The man died during the course of the night.

On post-mortem examination, a great number of small circumscribed abscesses or purulent depôts were found in the extremities—as many as thirty were on the left arm. There were two or three of the same kind in the pectoralis major, and several of the same description in the recti of both thighs, all circumscribed and embedded in the muscular tissue. In the left lung there was a small depôt of pus surrounded by a dark livid border and another of the same kind was discovered in the right lung. On the posterior surface of the heart there were dark-coloured spots, and the blood was remarkably fluid in all the vessels. There was a deposition of pus under the mucous membrane of the larynx, and also on the posterior surface of the epiglottis. The left half of the face was in a semi-gangrenous state.

On the 27th of August, the day after Kelly's admission, the experiment was again repeated on another ass with matter taken from the vesicles and pustules on his body. The lymph was inserted into the left nostril of the animal, the pus into the opposite one, and it was also inserted into the ear. On the following evening the ass appeared unwell, and, on the next day had an enlargement of one of the glands of the jaw on the left side, with increased heat and tenderness, accompanied by feverish symptoms. The left ala nasi was swelled, and the line of absorbents from this to the glands on the side of the jaw could be distinctly traced. On the next day there was a profuse watery discharge from both nostrils, particularly the left; and on the following day—the fifth day after inoculation—the discharge was purulent. Soon afterwards the animal was killed with *nux vomica*, it having been previously ascertained by Mr. Ferguson, V.S., that it was really glandered.

On examination, a cluster of pustules having a tubercular aspect were found in the left nostril; in the right there were circular patches of ulceration. Similar ulcers were found in the interior of the stomach, and there was a cluster of pustules in the anterior

lobe of one lung. There was no morbid appearance in the larynx or trachea.

Dr. Hutton exhibited several drawings to shew the condition of the various parts, particularly the nostrils, stomach, and lungs.

The next case, to which he would merely allude, as it was about to be published by Dr. M'Donnel, who had charge of it, had occurred a short time ago at the Richmond Hospital. The patient was admitted for an accident, from which he recovered; but before he left the hospital he was seized with an affection of the joints, followed by an eruption of pustules along the side of the nose, which were recognized as being connected with glanders. Mr. Smith procured some of the matter, and inoculated an ass, which in the course of four or five days became sick, and was subsequently attacked with glanders. The same phenomena as observed in the last case of inoculation were present. The cartilages of the joints were also found to be ulcerated.

Dr. Hutton exhibited some drawings to shew the condition of the parts. He also produced one of a case that had occurred some years ago at the Richmond Hospital, under the care of the late Dr. M'Dowell, before the disease was sufficiently known. The drawing had been made by Mr. Conolly, and Dr. Hutton observed, that he had represented the features of the disease with great accuracy, and depicted most faithfully the white areola which encircles the vesicles.

Since that period the areola has been invariably found to be present in every case, and is regarded as one of the pathognomonic features of the disease. This has been also noticed by Dr. Hutton, Mr. Adams, and other observers, and forms one of the marks by which the disease is distinguished from phlebitis.

Dr. Hutton then said that he should next proceed to read the notes of a case that had recently come under his observation. The patient, T. Butler, a boy about five years of age, was admitted into the Richmond Hospital on the 18th of December, 1840. It was stated that he had been always a fine healthy child up to the period of his illness. He complained at first of sickness, and pain in his bowels, and, on the following day, had pains in his knees. About three days afterwards the left side of the face and eyelid became swollen, and the usual symptoms of irritative fever set in, accompanied by thirst, restlessness, quick pulse, and scanty urine.

On the 5th of December the fever was increased, and the other side of the face was involved in swelling. On the 7th, a number of pimples with white tops appeared on the inflamed surface. On the 13th, the date of his admission, his face was greatly swelled and inflamed, and presented a number of pustules



mixed with several ash-coloured ulcers. He had also an eruption of pustules over his body. Some of these were flattened and somewhat vesicular, like chicken-pock—some were conical and pustular, and some in a state of incrustation. Around several of them, particularly those which were in the earlier stage, the peculiar white areola was still visible. Several of the joints were swelled and painful, and there was evident effusion into the left elbow joint. The child was extremely feverish and irritable, tossing about in the bed, and raving. The smell from his body was extremely offensive. He continued in this way with little change in the symptoms until the 16th, when he expired.

All that could be learned of his previous history was, that his father was a labourer and kept a horse, which was said to be labouring under a discharge from his nostrils, the result of cold ; but Dr. Hutton said that he had not as yet seen the animal. On examination after death there was an effusion of pus discovered in the left knee-joint. In the thorax there was a small collection of pus close to the edge of the left lung. The lung was of a deep red colour, and presented several ecchymosed spots on its surface, and contained two small abscesses. The right lung presented a few flattened tubercles. These were pointed out to the attention of the meeting by Dr. Hutton.

## EFFUSION INTO THE CAVITY OF THE CHEST, CAUSED BY THE ACCIDENTAL INTRODUCTION OF A STOCKING NEEDLE.

*By Mr. R. READ, V.S., Crediton.*

A cow, belonging to Mr. Thomas Leach, of Marchweek Farm, near Witheridge, was observed, about six weeks since, to be unthrifty, moping, standing about with her back roached, and making an occasional grunting noise. She ate, drank, and ruminated. A cough or hoose was never observed prior to or during the continuance of her illness ; but the coat was arid and stark, and she handled badly. Medical assistance was procured, and she was treated for a case of dyspepsia ; but the cow did not improve. About a week since, Mr. Leach requested his brother, Mr. Peter Leach, who served his apprenticeship with me and has since continued as an assistant, to look at her. On minutely examining the cow by immediate auscultation, he imagined that he could distinguish the sound of a fluid in the pleural cavity, and hinted his opinion to his brother that, from the symptoms that were present, the animal would soon die ; at the same time expressing a

desire to examine the cow after death, although at a considerable distance from Crediton, provided word was sent to inform him when she was dead. A few days afterwards word was sent to that effect, and the following were the

*Post-mortem appearances.*—On opening the cavity of the chest, a sudden rush of water ensued ; and which, it is computed, must have amounted to four or five gallons of muddy-coloured serosity. The lung was collapsed to three-fourths of its size. The pleura pulmonalis and costalis, and likewise the pericardium, were studded with lymphatic tubercles, some of which were in a state of suppuration. The tubercles did not extend into the substance of the pulmonary tissue, but were superficially confined to the pleuræ. The right lung was normal, neither was there any effusion into the pericardium. All the alimentary canal was in a sound state, except a small portion of the rumen, which was adherent to the diaphragm, and in which was found the sole cause of the malady (viz. a *stocking needle*, making its way through the midriff into the paunch, with its point inclining toward the off flank. The needle is enclosed to the Editor in this letter. Now, how did the needle get there? In the first place, it is a very common custom for dairymaids to stick needles and pins in their milking-caps or bonnets ; and I have no doubt it was either by accident dropped out and taken in with the food ; obstructed, perhaps, in the gullet, and thus penetrated to where it was found, mechanically irritating the pleural investments and exciting subacute inflammation and its consequences. It might be accidentally introduced externally, from the animal lying on it, or from the milkmaid leaning or rubbing her head against the side of the cow during the milking of the animal. All this, however, is speculative. It is, however, well known, that pointed bodies occasionally find their way out very remote from the part where they were introduced. There is a similar case recorded in the April number of THE VETERINARIAN for the year 1836, new series, No. 40, by Mr. W. Young, Swinton, of Old Monkland, N. B.

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## A CASE OF RUPTURED BLOODVESSEL IN THE LUNGS OF A COW.

*By Mr. W. A. CARTWRIGHT, V.S., Whitchurch.*

ON the 23d March, 1841, Messrs. Litler and Cooke, butchers, of this town, purchased a two-years-old calf heifer at Wrexham fair. She was brought home with some others, a distance of sixteen miles, the same day ; and, during the way home she was

hurried and chafed a good deal by bulls amongst them. She was rather unwell after she came home, and had a cough, and, in a week after, aborted, and continued to cough a little, at times, after that; but she was turned out to feed, and soon looked in perfect health, and gained condition fast.

On the 16th May following, the owners were loading some hay in the field where she was, and she was then lying down, and looked as well as usual. In a short time she began to cough, then got up and walked about, and coughed more violently, and immediately a quantity of blood was seen to issue from her mouth and nostrils. She then wandered about for nearly a hundred yards, and fell down and died.

On looking over the pasture, a deal of blood was observed on it. I opened her a short time afterwards, and found a great portion of her lungs very emphysematous, produced, most likely, by excessive coughing. There were four or five small abscesses in them. In other places there were indurated tumours. In the trachea, and some of the bronchial tubes, and about the nostrils, there was a little blood. In the rumen, near to the cardiac portion, there was about a gallon of coagulated blood. All other parts were sound.

*Observations.*—The lungs being diseased probably produced the coughing, and which ruptured a bloodvessel, and so caused her death. No doubt the blood found in her rumen had been coughed up from the lungs and swallowed, and the remainder from the lungs forced through the nostrils and mouth. She must have lost a great deal of blood, as but little was in the vessels, and her death was sudden.

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## A LARGE QUANTITY OF STONES FOUND IN THE SECOND STOMACH OF A COW.

*By the same.*

IN the month of May last, Mr. Jones, a butcher of this town, killed a fat cow, and in her second stomach was found ten pounds weight of stones, varying in weight from two ounces and a half downward. Some were two inches and a half long, but the greater number were flat, as if from attrition. The person from whom Mr. Jones purchased her said she fed and came on very well; and so she did most of the time with Mr. Jones: but still, he thought she did not feed so well as she ought to have done. She took the bull, and, soon after, he thought she fed better for a time; but afterwards she was at a stand still, and he killed her, and then found the large quantity of stones. The stomach was literally filled.



## TUMOURS ON COWS' KNEES AND HOCKS.

*By the same.*

As it is no uncommon thing to find large tumours on cows' knees and hocks, and some young practitioners, perhaps, not knowing their nature or treatment, I will just give a description of three I found the other day on one cow: one on each knee, and one on the side of the off hock, and each weighing about three pounds.

I opened them, and found they contained one-half serum of a citrine colour, and the remainder was coagulable lymph: but on squeezing the latter, a quantity of serum came out of it, leaving its texture soft and flocculent. These pieces of lymph floated loose in the serum in a beautiful manner from every side. The cysts forming them were an eighth of an inch thick, and dense, and their inner surface, when the radiations of lymph were scraped off, were smooth.

They are quite distinct from the joint or bursæ mucosæ of the parts, and may be safely opened or dissected out. I have cured many by passing setons through them, after having evacuated upwards of a gallon out of each. It appears that they are merely encysted tumours, formed by pressure, it being only an effort of nature to protect the parts by throwing them out. Sometimes the secretion becomes altered, and they contain merely pus.

Some fourteen years ago I had a very remarkable case of tumour on the knee of a cow, sent to me, weighing upwards of eighty pounds, and which took its origin from a similar cause. It was, in a great measure, bone, and was merely attached, just above the knee, to the radius, but reached from the shoulder to the foot, and projected out from the leg at least half a yard. When kneeling down, she had the appearance of a man standing on a wooden-leg, with the contracted limb projecting behind. It was half the size of a flour-barrel.

## WORMS IN A HORSE, SIMULATING RABIES.

*By Mr. J. D. HARRISON, V.S., London.*

DURING my pupillage at the College a communication was made to me by the late Mr. Brettargh, of Preston (with whom I served my apprenticeship), relative to a horse, the property of the late Sir H. P. Hoghton, Bart.; and as the symptoms, in some measure, were analagous to hydrophobia, a short history of it

may, in all probability, prove interesting. Professor Sewell will, I doubt not, perfectly recollect the circumstance, having shewn the letter to him immediately after I had received it, and he was, I believe, at the time, induced to think it to be a case of hydrophobia, an opinion with which I could not concur, although it was a disease of the precise nature of which I was completely ignorant.

In the early part of 1820, Mr. B. was called to this horse, which was stated by the coachman to be mad, and he, upon seeing it, was almost of the same opinion; for upon taking a bucket of water to him, and slightly agitating it before him, the most frightful convulsions were produced, and which were continued until its removal, when he became placid, and in a few minutes resumed his eating, and was apparently in perfect health. The paroxysms would take place every time water was offered to him, for two or three successive days, when an intermission took place, and he would and could drink it for the like space of time without the smallest disturbance or excitement.

In this manner the case continued for several weeks, without any visible or assignable cause, until accident revealed what science could not fathom. Mr. B. was one day on horseback when this horse passed in the carriage. He dunged, and Mr. B. examined the fæces, among which he discovered several teretes, when it immediately occurred to him that they might be the cause of this strange affection. By acting on this supposition, and administering hydrarg. sub. in doses of  $\mathfrak{z}$ j daily, for three or four weeks, an immense quantity of these parasites were expelled, and within the time I have mentioned the horse was perfectly cured, never having any similar attack during the last seven or eight years of his life. I have myself met with a similar case, which yielded to the same treatment.

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## ON OPENING THE TRACHEA FOR ROARING.

*By the same.*

DURING my apprenticeship we had a fine young mare, a perfect roarer, and Mr. B. being led to think that an adventitious membrane was formed in the trachea, excised portions of the cartilaginous rings, until he arrived at the source of ailment, which he removed with a scalpel, and in three weeks from the operation I rode her. She was perfectly sound, and continued so for two years. I daily used her both as a hack and hunter.

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## ON NECROSIS OF THE BONES OF THE HOCK.

*By the same.*

IN 1816 we attended a cow belonging to the late — Clayton, Esq., of Lostock Hall, labouring under necrosis of the bones of the hock, from an external injury. The cure appearing hopeless, amputation was proposed, and acceded to by Mr. C. She was brought to our establishment, a distance of nearly four miles, in a cart, and, in three days afterwards, the limb was removed about half way up the tibia, by Mr. B., nothing untoward taking place during the operation, if I except the breaking of the tourniquet (which was a strong cord put round the superior part of the femur, and twisted by means of a piece of wood) a thing which was soon remedied. The stump healed, and we had a wooden leg made for her, upon which in a very short time she was able to walk up and down the yard. In three or four months afterwards, from the pressure of the wood upon the stump, inflammation was again produced, and, spite of all our efforts, suppuration ensued, the tibia became diseased, and she was destroyed.

## FRACTURE OF THE CRANIUM SUCCESSFULLY TREATED.

*By the same.*

IN the summer of 1816 a pony was brought, labouring under compression of the brain, from fracture of the os occipitis. It could just stagger, but was unconscious of surrounding objects; and I several times, by the pressure of my finger upon the depressed portions of bone, made the animal drop as suddenly as if it had been shot. Mr. B. cut down upon it with a scalpel, and raised and removed all the fractured portions. Its consciousness then returned, and in less than a fortnight the external wound was healed, and the animal at its accustomed work, drawing a milk cart every day into the town.

## FRACTURE OF THE ISCHIUM.

*By the same.*

In 1817 a pony was galloped by the groom for a short distance upon some fine turf: it suddenly fell, and was incapable of again raising its posterior extremities. I went to see it, when I found



both ossa ischii fractured, and, suspecting further injury, I had the animal shot. Upon making a post-mortem examination, the ossa innominata were found fractured into no less than seven pieces: viz. the off side into four, and the near into three. The ossa ischii of the former was broken quite across, about two inches anteriorly was another fracture of it in a lateral direction; and again close to the acetabulum; and the ossa ilii, about half way between its tuberosity and the acetabulum; and on the latter all the three bones were fractured.

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## A CASE OF PLACENTAL PRESENTATION.

*By the same.*

ON the 22d May, 1837, I was called to a mare which it was said had an inversion of the uterus, and that in consequence of it the foetus could not be expelled. When I first saw her, three men were endeavouring by manual force to prevent any farther protrusion of what they concluded was the uterus, and, the better to accomplish it, had turned her upon her back. When I examined her, it proved to be what is termed in midwifery a placental presentation, which is of rare occurrence, and, I believe, generally attended with loss of life. This mare died before I had been with her five minutes, and I had not even touched her; but I attributed her death to the rough treatment she had undergone before I arrived; and, should I ever again meet with a similar case, I shall not hesitate to cut through the placenta, and thereby extricate the foetus, which I did in this case after death, and extracted it without difficulty.

In the spring of 1833 I was called to a strong cart mare with an inverted uterus. There was no difficulty attendant upon reducing it, but the pains of the mare were so violent that it was again expelled immediately after I had withdrawn my arm. My only chance to keep it in its situation was by bleeding and the administration of opium, which in this case acted like a charm, for immediately after I had given it, all spasm abated, and I left her before the expiration of an hour quite composed, and eating a bran mash. It may not be irrelevant to state, that among cows spasmodic action of the uterus frequently follows parturition; in all which cases I have invariably succeeded by bleeding and opium: in many cases with opium alone, but never, to my knowledge, did a solitary case get better by bleeding alone. My practice, for the last fourteen or fifteen years, in all similar

cases, has been to bleed if the cow was plethoric, and give pulv. opii  $\mathfrak{z}\text{ii}$ , in a pint of gruel; but if the animal was low in condition, I have generally contented myself with only giving opium.

On the 6th of November last I was sent for to make a post-mortem examination of a fine Neapolitan boar, that had died suddenly, and some suspicion was entertained that it had been poisoned. The abdominal viscera were all in a healthy state; but the stomach was full of undigested meat, while not the slightest mark of inflammation could be found in it: I therefore referred to the brain for a solution, and there, in fact, I found it. The membranes were highly congested, as well as the substance of the brain; and the sinuses were all completely full, which left not a doubt on my mind that the patient had died of apoplexy.

## INFLUENZA OF A SINGULAR CHARACTER, WITH CASES OF EUSTACHIOTOMY & TRACHEOTOMY.

*By Mr. J. CARLISLE, V.S., Wigton, Cumberland.*

THE following is a brief account of an epizootic which appeared among the horses of Sir Wastle Brisco, Bart., of Crofton Hall, in March and April last. Fourteen of them became affected by it, and about twenty others belonging to different people in the immediate neighbourhood. The singular character of the disease induces me to send you the particulars for insertion in your valuable periodical.

*Symptoms.*—The disease was ushered in by fits of trembling and rigor, the coat was staring, and there were paroxysms of coughing of an alarming nature. The muzzle was pointed forwards, almost in a straight line with the body. The muscles of the head and neck had a rigid and tetanic character. When the animal was made to move round the box he staggered in his gait, and, under the least excitement the paroxysm of coughing returned to a degree almost threatening suffocation. The membrana nictitans was violently thrown over the ball of the eye. The tail was shaking, and the fore legs abducted. He refused all kinds of food. The pulse varied from 60 to 80.

About the second day large tumefactions of the parotid gland and surrounding parts, in a direction from the buccinator muscle to the nose, of a hard indolent nature, began to appear. The respiration was laborious at intervals, the abdominal muscles tucked up, and the bowels constipated; the nostrils dilated, and the pituitary membrane and vascular conjunctive tunic injected.

The fæces were scanty, hard, and coated with mucus; and other symptoms indicating diffused mucous inflammation. It was quite impossible to administer medicine. Balls were coughed up as fast as they were attempted to be given, and drenching was attended with no better result.

The one-year old colts were the first that were affected, and five of them were labouring under the disease when I was first called in. One of them, a fine colt by Equator out of Tallerand's dam, was actually in a dying state from suffocation.

*Treatment. March 16th.*—I immediately informed the steward that tracheotomy was indispensable. Consent was readily obtained, and the operation performed, which gave instantaneous relief. Not having a tracheotomy tube at hand, the barrel part of a swan's quill became an excellent substitute. I next abstracted blood to the amount of ℥v, when evident symptoms of syncope presented themselves. After this I gave injections of the mag. sulph. in warm water, by means of the enema syringe. I blistered the throat, bandaged the legs, clothed the body, and made him as comfortable as I could. I then bled the other four, and applied blisters to their throats on the following day.

*17th.*—I found the tracheotomy-patient much easier; the respiration more tranquil, and readily carried on through the medium of the tube. The haggard dejected countenance, so evident on the previous day, betraying symptoms of approaching dissolution, had in some measure disappeared. The partial relief afforded was the mechanical result of the operation, and not from any considerable abatement of the inflammatory disease, for the pulse was 85 at the heart. The bowels had not acted, and the extremities were cold. The blister had made no progress, the tumefaction at the throat increased, and was as hard as before. Fomentations were applied for a considerable time, and the animal's head was kept over a pailful of hot water.

This treatment appeared to aggravate rather than abate the disease, and I determined on another vesicatory, which was well rubbed in, and a flannel bandage, saturated with the tinct. lyttæ, applied to the throat. The injections were repeated; the legs well hand-rubbed and bandaged, and the head hooded. The only medicine consisted of minim. vigint. aut trigint., acidi hydrocyanici bis die in aq. frigid. Oj. He drank it eagerly. Repeated venesection was out of the question. The whole extent of mucous membranes was involved, which was evident from the debility and prostration of strength, the general sequela of epidemic disease.

*18th.*—No better. Pulse 88. Bowels still constipated; extremities cold; the swelling at the jaw and head stationary, and



still hard; the fore legs widely abducted, and much pain betrayed when percussion was applied to the sides. The inspirations were short and painful, accompanied by a kind of grunt, and a peculiar *râle* of the lungs—a sort of crackling noise. From this I was apprehensive of serious thoracic disease. I placed a seton over the pectoral region, and blistered the sides; continuing the acid. hydrocyanic, and giving occasional enemias.

19th.—Pulse 76. A decided improvement. The blister is acting well; the seton has caused much tumefaction, but the swelling in the throat is as large as ever, quite hard, and painful when touched. No appearance of approaching abscess—respiration more tranquil—the mucous membranes paler. I gave an injection, and some fæces came away much coated with mucus. I offered him some milk. He swallowed a portion of it with very great difficulty, and part of it was returned through the nostrils, mixed with a green ropy secretion. He now coughed comparatively seldom, and previous to the cough he walked round his box, with his muzzle protruded and his abdominal muscles drawn up, until, at length, the effort was accomplished with a sort of blurt through the nostrils, while, at the same time, a quantity of muco-purulent secretion escaped through the tube.

He continued to improve until the 21st, and was able to drink milk and take thin bran mashes; but the swelling all this time remained stationary, without the slightest appearance of abscess or formation of pus. We kept his bowels open by enemias, and used every means to induce suppuration in the tumour, but without avail; and on the seventh day of my attendance we found him dead, and apparently without a struggle. Not a straw appeared disturbed, nor his clothes in the slightest degree displaced.

Anxious to ascertain the cause of his sudden death, and more particularly on account of the other four cases that were still depending, I proceeded to a post-mortem examination. I soon discovered the cause of death. It was a collection of pus in the eustachian cavity, and the fatal result was effected in a singular way. During the night the tracheotomy tube had become plugged up with bran, and completely prevented the access of air, and the animal died from suffocation. A pail had been slung in his box filled with bran mash, and some itching or irritation about the place at which the tube was inserted had caused him to rub against and inside the pail, and thus the tube became filled with bran. The eustachian cavity contained at least two quarts of ill-secreted pus. The mucous membrane was slightly inflamed in places, but not seriously so; the lungs were almost impervious to air, and in a state of collapse.

The disease in the other one-year-old colts assumed a more

protracted character. The tumefaction under the jaw was not so large. The bowels not much affected—the arterial action, which was at the commencement invariably accelerated, was kept down by the use of acid. hydrocyanici, given in aquâ frigidâ after venesection. I also applied blisters to the throat.

In some cases which occurred in the aged horses I bled freely, gave the acid in ʒj doses bis in diem, inserted a seton under the larynx, and applied blisters. I also kept the bowels open by injections.

After the patients had so far recovered as to take bran mash, I gave about mag. sulph. ʒvj, dissolved and mixed with the mash, which acted on the bowels and urinary organs. In two of the one-year-old colts the suppurative process went on, as in the case already related. In despite of all my endeavours, an accumulation of pus took place in the eustachian cavity, and began to assume a most alarming character, and which would ultimately have terminated fatally if relief had not been immediately obtained. To open the eustachian cavity was a dangerous operation, but I had no other alternative. I studied the parts well, and questioned myself again and again on the propriety or impropriety of so dangerous a proceeding. I at length determined, at all hazard, to operate, being encouraged by the worthy Baronet to do my utmost, and save the colts if possible.

I proceeded with the operation in the following manner. At the angle formed by the inferior and anterior border of the wing of the atlas and the posterior ridge of the stylo-maxillaris—inferiorly by the superior occipital branch of the jugular, and posteriorly by the ramus-anastomaticus, and part of the parotid gland—within this angle or space formed as above, I cut down through the integument, and carefully dissected away some muscular and cellular tissue. I then laid bare the ramus and the abovementioned parts—drew part of the parotid gland forward, and with a small trocar opened the guttural cavities. I then withdrew the trocar, leaving the canula, which I secured by tape placed round the colt's neck, and allowed it to remain in for three or four days. The pus continued to escape for at least a quarter of an hour. Not less than a quart of it flowed out. The canula was small, and only required to have the trocar put up it at times, on account of its filling being obstructed by the pus. The operation gave immediate relief, and the colts soon got well.

In one case, about the period of convalescence, three large abscesses formed, one on each biceps abductor tibialis, opposite the tuberosity of the ischium, and the third opposite the cricoid cartilage. Some small ones also formed at the commissures of the lips: these abscesses were very troublesome. After opening, they

invariably formed again in the same cyst. To this horse I gave moderate doses of iodine suspended in spt. æther. nitr. daily, mixed with bran mashes and oatmeal.

After taking a few doses he shewed symptoms of amendment, and the abscesses disappeared. I consider this a valuable medicine when given in this way, and think its action on the system is twofold. I most certainly have had proofs of its tonic power.

In all these colts the expiration was singularly painful and protracted. It seemed as if the diaphragmatic and intercostal muscles were spasmed, and could not compress the lungs and approximate the air-cells and force out the inspired air.

The hydrocyanic acid is the best sedative and antispasmodic I am acquainted with: it is really, in my opinion, invaluable. It is safe, certain in its effects, and easily administered. Its action is almost immediate, and easily governed. I have succeeded in the treatment of three cases of tetanus by the use of this acid alone, which cases I intend publishing in *THE VETERINARIAN* at my early convenience. Mr. Morton's *Veterinary Manual* deserves to be consulted on this point. I am proud to see the second edition of this valuable little work. It is deserving of our most grateful acknowledgment.

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[Mr. Carlisle's interesting account of "A Disease of the Heart" shall appear as soon as we can obtain a coloured engraving of the case, about which there is at present considerable difficulty. It is most beautifully and accurately delineated.—*Ed.*]

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## ON THE NEW EPIDEMIC.

*By Mr. G. A. FARROW, V.S., Durham.*

WITH regard to the epidemic among cattle, sheep, and pigs, we regret to say that in many parts of the country it has appeared afresh, and is as virulent and infectious as before. Mr. Farrow, in a letter that we have lately received from him, states that it is spreading over the county of Durham as rapidly as in autumn, attacking those cattle first that have been at any market or fair. So convinced are the greater part of the farmers that the disease is principally contracted at these places, that many have refused to purchase any cattle from the market. In almost every instance the breaking out of the disease on a farm can be clearly traced to infection. They have been either in contact with strange stock, or fresh cattle have been brought on that farm.



A singular case of this kind occurred. A farmer purchased a calf in the market, and on his arriving home, in order to place the young animal in a warm and comfortable situation, he gave directions that it should be taken into his cow-house among his cows. He soon, however, perceived that the young animal was unwell, and quickly removed it to another place, where it eventually died.

On the third day after this temporary visit of the calf, the cow that had stood next to it became ill. Three days after that the next cow was affected; and in less than six days every cow in that house was on the sick list.

A pig in the same yard broke from his confinement and got to the dunghill and ate some pieces of turnip that were left by the diseased cattle. On the third day afterwards he was affected. Fortunately, care had been taken that he should not go back again to the sty, and all the rest escaped; but it fared badly with him.

Mr. Farrow accounts for the re-appearance of the disease in a way that would be perfectly satisfactory, if such a term could be applied to such a case. A great number of Irish and Scotch cattle are brought into this country twice in the year—in the autumn for the strawyard, and in the spring for grazing purposes. These cattle arrive in large droves, and are sold to a great many farmers in small lots. There are very few of these droves among which some diseased cattle might not be found. Many of them are obliged to rest for a certain time; but others that have apparently escaped the infection, or who have recently recovered, are taken on to the different markets and sold.

The purchaser, being perfectly ignorant of their coming from a drove which had contained some infected cattle, or have themselves had the disease so recently, takes no precaution, and the infection is propagated to the rest of his stock.

In the northern part of the kingdom, and too much everywhere, these droves have been the means of the disease spreading wider and more rapidly than all other causes put together.

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## STRAY PAPERS ON VETERINARY JURISPRUDENCE, ADDRESSED TO VETERINARY STUDENTS.

*By Mr. THOMAS W. MAYER, V.S., Newcastle-under-Line.*

[Continued from vol. xiii, p. 54.]

Gentlemen,—VARIOUS circumstances, some of painful retrospect, combined with others of pleasing anticipation connected with our profession, have prevented my addressing you in that

order, and with that regularity, which the importance of the subject demands and the necessities of the case require.

During the period that has elapsed, many from among you have been called upon to discharge those duties, for the performance of which it is to be hoped they were well prepared. Those individuals will ere this have learned that it is no easy thing either to steer clear of the difficulties which beset their career, or to reconcile those differences of opinion which unhappily prevail among us. To you who remain, your ranks increased by fresh arrivals, it is necessary, for the sake of connexion, that I should direct your attention for a few moments to the points I have already ventured to bring before your notice. I have referred to the present state of veterinary jurisprudence, in order to shew how needful it was that you should endeavour to wipe away the blot that exists upon it. By cultivating a more extended acquaintance with the first principles of your profession on the one hand, and the duties that relate to yourselves, your brethren, and your employers, on the other, I stated that the honour and dignity of the profession would be maintained. That, as you were by profession gentlemen, you would be expected to exhibit that character in your walk through life; and I finally pointed out the benefit you would derive from the adoption of such a course, and the mischief that would inevitably befall a contrary proceeding. Eighteen months have now elapsed since those suggestions were laid before you. Has any thing transpired in our courts of justice or among ourselves, to render those observations necessary, or to weaken their force? When counsellors gravely assert that "*they can find any number of veterinary surgeons who will swear any thing*"—when the *elite* of our body are found in our courts of justice asserting some facts which are directly contradicted by others, is this the time for inaction, or for diminished exertion? When the profession are endeavouring by fair and honourable means, divesting themselves of all party intrigue and selfish purposes, to obtain for themselves and you an honourable station in society—when the profession demands from yourselves a more than ordinary degree of attention to your studies, and the public require a greater acquaintance with the animals to whose necessities you administer—is it in times like these that you foster animosities, listen to public-house debates, or pass that time which should be devoted to nobler objects in inattention to the lectures of your professors, or in unprofitable and unmeaning disputations? Is it a time to act with uncourtesy to your teachers, and to exhibit to the world your unfitness for the station in society you ought to fill? Better things, it is to be hoped, may be expected from you. Desiring to fulfil every

required duty with zeal, honesty, and punctuality, you will, I trust, live in good fellowship with all men.

On no point will your professional knowledge and reputation be more severely put to the test than in the examination of horses;—to collect and give effect to the facts already ascertained relating thereto is the object of veterinary jurisprudence.

It is well-known that, in the sale of horses, certain terms have been made use of to denote the nature and qualifications of the animal: these are shortly expressed by the words “sound, and free from vice.” For the prevention of fraud (of which in horse dealing there is no little) and for the benefit and security of the purchaser various laws have been made which may be compressed under the heads of sale and warranty. The first contains the conditions necessary to constitute a legal transfer of the property and the means by which fraud may be detected and punished. The second details the nature and effect of a warranty, representing how, in the event of the animal not proving what was expressed, the purchaser may obtain redress. These laws we shall consider in a future paper.

The principal question upon which the consideration and judgment of the veterinary surgeon is required, relates to the soundness of the animal, and the possession of the requisite qualifications for the duties demanded from him; and as, upon a question of such importance, it is impossible that any man’s opinion should be more looked up to than those who from their studies are supposed to possess the means of detecting any variation in the healthy and natural structure of the animal frame, it is of the greatest moment that you rightly understand the meaning of the question, in order that you may be enabled to give a satisfactory answer. To do this, you first acquaint yourselves with the meaning of the terms used.

No words could, perhaps, be fixed upon in the English language to express the different qualifications required in an especial manner in an animal like the horse, than the words *sound* and *soundness*. On reference to your dictionary, you will find that “sound” means healthy, right, stout, hearty; “soundness,” health, truth, solidity.

In stating that a horse is sound, we understand then that he is *healthy*, free from sickness and disease; *right*, suitable, true; *stout*, hearty; if unsound, either not free from disease, not right, not stout, nor hearty.

You would naturally suppose that no great difference of opinion could prevail on a point like this; but you will find your supposition sadly incorrect. You will hear one asserting this to be soundness, another holding the very contrary opinion to be the



correct one ; nay, you may hear the same individual assert “ *that a horse is sound which is perfect in structure and perfect in function, and that he is equally sound with an alteration in structure, providing he is not likely to be incapacitated from his ordinary duties.*”

Gentlemen, have nothing to do with attempting to reconcile these incongruities. There is no intermediate stage between soundness and unsoundness. Take the words in their simple and intelligible sense as admitted by men better versed in the English language than ourselves, and never attempt to make use of any word, in giving your opinion on the soundness of horses, but what you wish to be taken in its literal meaning. A horse warranted sound must be either sound or unsound. Should any member of the profession discover that he is neither one nor the other, I trust he will express himself by some word that will render his opinion intelligible.

In delivering an opinion on the soundness of horses, you must recollect that you have a threefold duty to perform ; the first relating to yourself, the second to the purchaser, and the last to the seller. To fulfil these, it is indispensable that you make a minute examination of the animal. The manner in which this should be conducted it is needless for me to relate ; you have the best opportunity of acquiring that information at College. It is, however, to be done with the strictest attention as to the form, structure, and function of both external and internal parts. Difference in form is commonly followed by difference in structure, and difference of structure may lead to alteration or suspension of function. All are but deviations from the healthy structure of the part, and as such are a direct contradiction to the term sound. The result of your examination may be, that the horse is what he was represented : but it may be otherwise ; if so, you will express in what consists his unsoundness. Now, supposing this unsoundness to arise from some little exostosis or some other equally unimportant matter, which does not at all interfere with the usefulness of the animal, what, you may ask, are we to do ? *Pronounce the horse unsound.* While truth compels you to make this statement, justice to the purchaser and seller demands something more from you. The law as it at present stands with regard to soundness amounts to this, that an animal may be unsound ; but if that unsoundness does not and is not likely to interfere with the usefulness of the horse, and is not accompanied by any derangement of function, the purchaser cannot return the horse upon the seller. Thus, a horse with a splint situated where it is not interfered with by the other leg, or where it is not likely to make him lame, is not legally returnable, and is not depreciated in value. These facts you are bound to state to the purchaser. You may

consider it an axiom, that a horse may be unsound without being depreciated in value, neither diminished in his usefulness, nor returnable. As, however, the contrary may happen, it will be requisite for you invariably to state, *first, the unsoundness; secondly, whether it will interfere with the function of the part or the duties of the animal; thirdly, whether it depreciates his value; and, lastly, whether it renders him returnable.*

[To be continued.]

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## CONSULTATIONS, No. XXI.

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### A CASE OF SCIRRHUS OF THE TONGUE IN A HEIFER.

Dear Sir,—THE kindness I experienced from you during my pupillage at the College emboldens me to address you respecting a case I have at present under treatment.

The animal is a three-year-old heifer. About five or six weeks ago the owner observed that she was losing flesh, that the saliva was dripping from her mouth, and that her cheeks appeared enlarged. A few days afterwards he examined her mouth, and found a considerable portion of masticated food impacted between the molar teeth and the muscles of the cheek. This he removed; but a few days afterwards he observed that there was great difficulty in ruminating. He then examined her teeth, but could not detect any thing amiss with them. A week ago, he requested me to see her. I found her standing up, and trying to chew her cud. She evinced much tenderness of the mouth, the saliva was flowing profusely, and the tongue slightly protruded. She was very much emaciated, and her milk nearly gone. Upon examination, I found her tongue enlarged, appearing shorter than natural, and hot, and very tender when pressed with the hand. There is considerable enlargement of the submaxillary space. The tongue is almost of a natural colour. She is very eager for food, but the poor thing cannot manage now to get much of it over the tongue. All the treatment I have ordered is an application of alum and verjuice.

Can you inform me what is the nature of the disease? Is it cancer?

There is a farmer living in this neighbourhood who says he had two cases similar to this some years since; that they both died; and that it was cancer in the tongue that destroyed them.

I have tried to find, in the work on Cattle written by you, and in my other works, any thing bearing upon it, but am unable so to do. I should, therefore, feel greatly obliged by your giving me

your opinion upon it. I would not have troubled you ; but you were so kind as to say, the last time I had the pleasure of seeing you, that your opinion on any case should be always at my service, if I required it, when in practice.

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1, Osnaburgh Place, New Road,  
4th Aug. 1841.

My dear Sir,—You give me rather a puzzling case to solve.

I am much inclined to think that the disease of the cow's tongue is of a cancerous nature, and, in the desperate situation in which the poor animal is, I should at once have recourse to decisive measures, as some would deem them.

Ascertain, on the superior or dorsal portion of the tongue, the situation at which the tumour and the tenderness are greatest. Form to yourself, as accurately as you can, some notion of the depth of the tumour or abscess, and freely cut down upon it with a scalpel or carved bistoury, in a longitudinal direction. The bleeding will be easily managed by means of the torsion forceps, or the cautery. A lotion of the chloride of lime may, perhaps, be needed. I should be thankful for an account of your proceedings.

Faithfully your's,  
W. YOUATT.

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Wickwar, Aug. 15, 1841.

My dear Sir,—I received your letter of the 4th inst., and immediately explained to the owner of the poor beast the plan of treatment suggested by you for her relief. I did not perform any operation upon her tongue, as, upon carefully examining the same, I could not perceive any fluctuation ; therefore thought it useless to cause her unnecessary pain by an operation.

The owner had her killed on Tuesday last. She was very much emaciated. I examined her tongue and surrounding parts, and found it, as before described to you,—enlarged from near the root almost to the tip, but very little altered in colour. Upon cutting into it, great resistance was offered to the knife, the cut surface feeling hard and granular. In some parts there were little abscesses, containing thick yellowish matter, of the size of a horsebean. The whole substance appeared studded with tubercles. The disease extended throughout the whole of the tongue.

I believe, Sir, the disease may be termed "Scirrhus," or what is vulgarly called cancer of the tongue.

I remain, my dear Sir, your obliged servant,

JAMES HOWELL.



## THE VETERINARIAN, SEPTEMBER 1, 1841.

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Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

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SEVERAL of the letters that have reached us during the course of the last month are too interesting to pass unnoticed. They give to our Periodical that character and standing which it must assume, if it would do justice to the profession of which it happens, at present, to be the acknowledged organ.

One writer, and one only, but a man whom all who know him highly respect, advocates, yet not to its full extent, the exclusive system. All the others, each occupying his own peculiar ground, while they acknowledge the propriety of certain restrictions, and condemn the occasional unnecessary obtrusion of minute details, unite in demanding that the veterinary profession shall not be lowered by returning to a system of secrecy and exclusion not found in any other country.

The first letter is

*From Mr. J. SEWELL, V.S., Brighton.*

I beg to assure you that I should be very sorry to throw any impediment in the way to oppose the progressive improvement and respectability of the veterinary art. At the same time I am anxious to protect the interest as well as the respectability of the practical man; for if he cannot get a living by his practice, unless he is independent of his profession—and that is not the case with all—his respectability amounts to nothing. There are many of us depending upon our steady perseverance and success in practice to establish our credit and skill in the opinion of the public and our employers.

Now, with due respect to you and many others in the profession, whose practical experience you from time to time have published, and wherein many of them have displayed great judgment,—it is my opinion, that, if such records could be confined to the profession, it would render it a great service, for I am convinced that we cannot be too communicative to each other; and I feel the greatest pleasure, when in my power, to give any professional information to my brother practitioners.

No doubt many of our writers make themselves popular with

the public ; but it is frequently at the expense of the private practitioner. You may think me illiberal ; if so, I cannot help it, for I speak from many years' experience and observation.

As to the Professor's late circular to the agriculturist and breeder, many of our brethren whom I know complain how much it hurt their practice amongst cattle.

I see by the press, that the Professor's report, read at the agricultural meeting at Liverpool, formed by six hundred communications upon the recent epidemic, is thought so much of, that they refused a copy of it to the reporters, intending it for their own publication ; but the Professor commenced writing on the treatment of the diseases of cattle before he knew how to teach it.

You and many others anticipate a great advantage to the profession in its being united with the Agricultural Society. I hope that you will not be disappointed. No doubt, those gentlemen who give the most practical information in their writings will be thought much of ; but, from what I see and know of the breeder and grazier, I fear the practical man will be less called for. They will apply to him in extreme cases, but his general practice amongst them will be curtailed.

An old practitioner, in a large market town surrounded by breeders and graziers, informed me that his father practised for forty years before him, in the same town, as a farrier and cow-leech, and used to supply all the town and country round with medicine for the horses and cattle, and attend them ; but now they go to the retail druggist for every thing : he has not half the practice his father had, yet he is a better qualified man. He complains very much of the information given in *THE VETERINARIAN*, and the Professor's circular. It encourages the empiric, so that owners of horses and cattle quack their stock more than ever was known before. Some of the records of "the Association" which you have published contain good practical observations ; but much of it would be better confined to the school until the speakers have had a great deal more practical experience.

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We will now take in alphabetical order the advocates of a different plan.

*From Mr. JOS. BEESON, Amersham.*

My opinion is, that the Periodical now under consideration is of extreme value. It is, indeed, the very life and soul of the profession. It is the only and proper medium through which the

members of the profession can communicate their views and observations on interesting subjects, each one in his turn directing the attention of his brethren to something which may have been comparatively unnoticed by the profession, or which may be peculiar to certain localities, and yet important to every one. I have always admired the liberality which exists between the members as manifested by their free and open contributions, the result of which must be, occasionally at least, an exchange of facts alike valuable to all.

No man on earth has a greater hatred for selfishness than I have, and it would appear selfish indeed to restrict the Periodical now in question to the members of the veterinary profession.

But, my dear Sir, I have witnessed the fact that non-veterinary men do occasionally take advantage of what they see in *THE VETERINARIAN*. Indeed, many papers of consequence have found their way into other periodicals for the benefit of farmers, thereby giving them an opportunity of putting that into their pockets which is our birthright. The veterinarian may bear the burden and heat of the whole day: a non-veterinary man steps into the field at a later hour, and reaps an equal share of the produce. If the veterinarian, by contributing to the advancement of veterinary science, has made or is making a rod for his own back, why, I see no reason that he should complain of any plan the profession may adopt for their protection. But this is not the reason I have not oftener contributed to the common cause. My only reasons are, that I find little time for writing, and I feel my insignificance amongst your abler contributors. But as facts, no matter from what source, relative to veterinary medicine cannot fail to add to the common stock, I promise you that in future, if possible, I will contribute more and oftener: and if worthy your insertion, well; if not, put it aside, and I am not offended.

For the present I must conclude by wishing you every success in endeavouring to render the matter satisfactory.

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*From Mr. J. F. BICKFORD, V.S., Kingsbridge, Devon.*

After the many excellent letters which appeared in your last number on the propriety or impropriety of diffusing veterinary knowledge beyond the circle of the profession, I almost feel that it would be presumptuous in me to intrude any remarks.

I cannot, however, refrain from entering my protest, humble



as it is, against any attempt to render *THE VETERINARIAN* an exclusive publication. If such an attempt should unfortunately succeed through the instrumentality of my professional brethren, I think no act that could possibly be devised by the ingenuity of man would have a greater tendency to render us, as a professional body, the laughing-stock and contempt of every scientific person. Secresy is only a cloak for ignorance in most things, and so indeed would the thinking portion of the community regard it in reference to the proposed partial distribution or circulation of our monthly Periodical. My conduct in respect to it has been, and I hope will continue to be, very different.

I have recently been requested to become the librarian to a farmer's club established in this place, for the purpose of diffusing the best information on agricultural subjects by means of periodicals and other selected works, as well as occasional lectures by members of the club. Now I should be very averse to recommend any thing which I might deem inimical to my interest. I did not, however, hesitate in the least, on the establishment of this society, to recommend *THE VETERINARIAN* as well worth the attention of its members. It is regularly taken in; and I rejoice to say that it is read by some of my best employers, and who, I believe, are disposed from the very perusal of that talented work to appreciate more highly the superior qualifications of a veterinary surgeon in comparison with the cowleech or farrier. It is for this very reason that, on all occasions in the course of my practice, I endeavour to explain the principles upon which I act, the object sought after by the medicine given, and the effects likely to result. The impression on my mind is, that by such a mode of proceeding, if generally adopted, we should succeed in establishing a kind of test, by which our employer may be led to discover the mere ignorant pretender from the man who practises on correct principles, and who is always ready to give a reason for what he does. Do not then, Sir, be induced by the contracted or selfish views of any of the profession to carry their exclusive object into effect.

There is not an individual connected with the Royal Veterinary College for whom I entertain a higher respect than the talented Lecturer on Pharmaceutical Chemistry. His unwearied industry, and indefatigable exertions in the situation which he occupies, have often been the theme of my humble praise. To speak phrenologically, his large organ of ideality enriches every line he writes with a kind of poetic radiance. He, I am sure, could never be seduced to take up, as Byron says, the "cabin'd, cribb'd, and confin'd" view of the exclusives. I am really at a loss to conceive how any well-informed mind can be deluded by

such an inappropriate emblem of a scientific mind—a fit type of the priests of the middle ages.

As the Editor of *THE VETERINARIAN*, allow me to recommend you to follow out the practice observed by the journals of human medicine. Let your subjects be clothed, as Mr. Morton well remarks, in scientific terms, and understood only by scientific men. We have no occasion in our narration of cases to communicate or particularize the doses of every drug we administer, “to the twentieth part of one poor scruple;” but rather let us observe the practice so well recommended in the last paragraph but one of the letter of Mr. Read, of Crediton, “If it should unfortunately happen that some now in the profession cannot as yet understand correctly communications so made in consequence of a defective education, let them stick to the old motto, ‘*Labor omnia vincit*,’ and then all the unfounded apprehensions and visionary fears as to the injury likely to be sustained by the general circulation of veterinary science will pass by as the idle wind, which we regard not.”

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*From Mr. SAMUEL BROWN, V.S., Melton Mowbray.*

THAT Professor Sewell’s circular on the epidemic among neat cattle should have excited, not only feelings of jealousy and disapprobation among practitioners, but also have called forth those animadversions that have appeared in the pages of *THE VETERINARIAN*, is not in the least surprising: but when we take a retrospective view of the hitherto neglected state of cattle pathology—the rapid progress which the epidemic was making through the country—and the terror which the name of murrain excited among the agriculturists, many of whom were credulous enough to suppose that the disease originated from unnatural causes, and that it was sent by a Divine Power to scourge the nation for her iniquity,—in such a state of general excitement and dismay, as well as from the impression that this was a new disease, and one, too, which the *cattle doctors* knew little or nothing about, and also, in connexion with this, *the astounding fact*, that veterinary surgeons did not generally treat the diseases of neat cattle, neither was it reasonable to suppose that they could have much knowledge in this branch of veterinary science, because cattle pathology had not been taught at our national institution;—under such circumstances, the agriculturists very naturally felt much alarm, and anxiously sought a remedy for a disease, the exagge-



rated reports of which had led them to suppose that its baneful influence might prove ruinous to the owners of cattle, either by carrying off whole herds of them, or rendering them so ill-thriven that they would be useless for the purpose of grazing to fatten—on such an occasion of serious apprehension, I say, to whom were the members of the *Royal English Agricultural Society* to apply for assistance, but to the gentleman who receives a considerable annual sum out of the society's funds as a remuneration for the performance of certain duties, and which additional duties we, simple-minded country veterinarians, imagined were expressly those of teaching veterinary students cattle pathology, and not the performance of such an arduous task as that of writing a circular, which was, in effect, to make the whole agricultural population in England veterinary surgeons.

But, Sir, joking apart, we cannot reasonably suppose that the object sought to be obtained by the noblemen and gentlemen who constitute the *Royal English Agricultural Society* was that of procuring from Professor Sewell a short system of veterinary education that would, in effect, enable them to dispose of the humble veterinarian's services, and render him, professionally, a useless member of society; but rather that of simply procuring from the newly-made Professor of Cattle Pathology a panacea for that truly protean malady, the epidemic, which was so prevalent among neat cattle, and other domesticated animals, in the year 1840. It, however, unfortunately happened, both for the agricultural interest and veterinary profession, that Mr. Sewell forgot that the English agriculturists were not educated veterinarians, and consequently deficient in that professional tact which was so requisite to enable them to recognise the different stages of disease, and test the efficacy of his receipts, by adopting them according to the indications of treatment. Thus the Professor's receipts too frequently failed to effect a cure, and the consequence was, that the graziers, after a little dear-bought experience, *abandoned his practical principles*, and left nature to relieve herself, which she effected with much better success; for I have heard many of them say that, *they never lost a beast after they left off giving the prescribed medicine, and that their cattle got over the complaint much sooner without it than with it*. So that our worthy Professor was peculiarly unfortunate in his benevolent intention, as his receipts imposed upon the credulity of the agriculturists, and led them to conclude that they were in possession of a specific remedy for the murrain. But in proportion as those remedial measures failed to answer public expectation, the circular created a want of confidence in our skill, and engendered the impression that our knowledge in cattle pathology was strangely



and disgracefully limited, from our having been educated at an institution where the professors gave such an apparently deficient course of veterinary instruction: so that the profession became lowered in public estimation, by a fallacious attempt to inculcate the practical principles of veterinary science among those persons who really do not give themselves the trouble to acquire sufficient knowledge of the art to be able to trace the connexion of cause and effect. The consequence may, and probably will be, that it will require a long course of successful cattle practice before we can disabuse the public mind, so far as to procure the same amount of esteem and confidence from our employers which we possessed before the appearance of Professor Sewell's circular.

I am, &c.

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*From Mr. GEO. FARROW, V.S., Ash, Durham.*

My dear Sir,—I should consider myself unworthy to be a member of the veterinary profession, were I not to state, in reply to your note of the 2d instant, my decided opinion on a subject that appears to be so intimately connected with the advancement of the veterinary art.

That I have derived much useful knowledge from the public records of veterinary transactions I do acknowledge; and to you, as the principal contributor, I return my most cordial thanks. The great improvement which has recently taken place in the veterinary art, and particularly in the treatment of the diseases of cattle and sheep, is attributable, in a great measure, to the communication among veterinary surgeons, as recorded in *THE VETERINARIAN*. This means of improvement we have enjoyed for some length of time; and are we to be deprived of it now, simply because a few individuals, not connected with the profession, will take advantage of it?

That many agriculturists, farriers, and other persons will derive much insight and knowledge from the publication of cases and successful modes of cure, cannot be denied; but, wholly ignorant of the structure and functions of the animal frame, will they be enabled to use those remedies with the same success that would attend their application in other hands? I answer, that they will not.

Where a great quantity of stock is kept, there are many cases of slight illness where a regular practitioner is not required; and yet something must be done. There are, also, many proprietors of horses and cattle that are several miles distant from the residence of a veterinary surgeon, and on this account are obliged to treat

many diseases that occur among their stock ; but on all occasions where the disease assumes a serious character, a respectable practitioner will be called in.

If the regularly educated veterinary surgeon is possessed of that knowledge which renders him competent to undertake, honestly and successfully, the medical treatment of the animals committed to his care, he will soon triumph over the empiric or mere pretender.

In cases published, the minutiae of practice need not be stated. The general plan of treatment advocated is all that is necessary for the elucidation of any case, and a few hints from them are sufficient for the intelligent practical man.

You will see, therefore, that I am no advocate for the exclusive mode of recording veterinary transactions : on the contrary, I imagine, that if a veterinary work is properly conducted, we shall be benefitted by it, rather than injured. If the practitioner is made acquainted with his profession, in all its branches, he will have nothing to fear ; but being sent from the Veterinary College, as used to be the case, only half instructed in the diseases of cattle and sheep, it requires years of industry, hard labour, and study, before he can gain the confidence of his employers.

The course which you have so ardently pursued appears, to me at least, that which will ultimately raise us in public estimation. If I can assist you in your zealous and honourable cause, no one in the profession shall be more willing : you shall, at least, have my good wishes.

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*From Mr. G. HOLMES, V.S., Thirsk.*

Dear Sir,—In reference to the subject now agitated in the profession, should the writer's sentiments be at variance with those of his highly-esteemed and ever-to-be-respected friend, he trusts that the sincere and fervent desire he takes in every thing that contributes to the honour and well being of his calling, will be deemed a sufficient apology for the liberty of expressing such opinions, as well as a licence to give a due and candid latitude to them, in order that he may be fully acquitted of any thing approaching to a seeming subserviency.

The last two Nos. of *THE VETERINARIAN* abundantly and clearly testify how far and how much some of the profession feel themselves concerned in the matter. Now, although a contrast of the several expressed ideas exhibits a difference of sentiment, yet must neither party's views be too hastily disposed of, without reflecting that, possibly, judgment may be either obscured or

biased by a beam that prevents impartial and uninfluenced discrimination.

The perusal of all my brethren's letters has afforded me no inconsiderable degree of real satisfaction, as they bear ample testimony—notwithstanding some variance of expression—that the dignity, as well as the mere prosperity of the profession, is the concentrating focus and the rallying-point, even of the diffident and weak-hearted: therefore, my small meed of approbation cannot be withheld, were I inclined to do so, from the quarter where I deem it to be so fully due.

The commencement of each month has, hitherto, been to me a sort of gladsome era; for I can assure you that it is generally hailed by feelings of professional delight, as I have invariably found a something either to interest or inform my speculative faculties, so far as either professional skill or humanity was concerned, in alleviating a few of the dumb kind's inherent ills; and if the truth were as plainly confessed by others, it would be found, beyond doubt, that all still, or at least may, learn as long as they live; and also, that the regular publication of *THE VETERINARIAN* with the records of the Veterinary Association is a *bonâ fide* boon of no mean worth to the more experienced practitioner as well as to the mere incipient.

Since the issuing of Professor Sewell's circular by the Agricultural Society among its members, many of the profession have experienced considerable injury in their practice, and now find themselves held at a discount; for, no sooner was the farmer or grazier in the possession of the Professor's mode of treatment, &c. of the epizootic, than he considered that the services of the regular practitioner were easily dispensed with; and, indeed, in point of fact, in many instances the veterinary surgeons were slighted, as being useless and altogether uncalled for. Now, this circumstance seems to be considered as a strong corroborative proof that the publication of the treatment, &c. of diseases in plain straightforward language is an injury of considerable extent to the profession, by being divested of proper technicality, and of the too great latitude of circulating the benefits of that knowledge which is only to be acquired by an expensive education! Hence, then, a rich field for the unscrupulous controversialist. But charity forbids the supposition that any, no matter how subtle and formidable in argument, would be so recreant and base as to jeopardize the interests of the profession, either from individual pique or sophistical ambition. For my part, as I despise and scout the exclusive system in every possible shape, as being the only resort of empirics, that vainly hope to screen a little longer their absurdities from public scorn and indignation, yet, as a member



whose profession's honour and well-being are at stake, I must, in accordance with duty and principle, endeavour to recommend nothing, unless it tends to strengthen the bonds of concord and harmony among the members of that profession, as well as protect its future interests from the insidious designs of the selfish, or those of the knave, who is ever ready to advantage himself at others' expense.

But, whatever may be done, let it be the determination of guarding our honour as well as our other interests. In order to do this effectually, it seems to me that a medium course is the best: first, because by not being too exclusive we shall avoid the peril of being styled mysterious quacks; and, secondly, by adopting a technical phraseology, as the human surgeon, without suppressing the spread of scientific knowledge, we shall prevent the ignorant and illiterate from profiting by the results of our expensive education and acquirements. The mischief done to the profession is not effected by the clever and scientific, but by the obstinate and ignorant, for the former will at once send for the regular practitioner upon the first appearance of danger, while the latter will rather prefer, for present economy, to quack himself; and, seldom or ever, should he happen to have a plain receipt book, &c., will he think of applying elsewhere, until he has exhausted all his nostrums. At last, and only when too late for the saving of life, is the veterinary surgeon summoned,—and for what?—why, just to see the victim of bungling obstinacy expire, and himself to have the usual honour of being said to be—never of any service!

In conclusion, I have only to observe that, with such characters as a Percivall, a Dick, a Youatt, a Morton, a Karkeek, &c., &c., to support it, *THE VETERINARIAN* can never fall to the ground. But if the chaff will separate itself from the wheat, why, let it e'en do so; and then will be seen more immediately its true quality, viz. that it is really nothing but chaff, instead of being genuine grain.

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*From Mr. J. HORSBURGH, V.S., Dalkeith.*

My dear Sir,—I share in the surprise of many with whom I am in the habit of occasionally associating, at the spirit of dissatisfaction manifested by several practitioners at the straightforward way in which the diseases of our patients have been occasionally described, and veterinary affairs in general treated of, in your Journal. What is the cause of that dissatisfaction? Have they not, again and again, been benefitted by the records of

which they complain? Can the veterinary art be more rapidly and surely advanced than when it is the practice of each member of our profession to contribute his mite to the general stock; and when each one is proud to think that, to a certain degree, according to his opportunity and his ability, he has contributed to the onward progress of his profession?

The principle of exclusiveness which has been advocated, where is it to be found in all its pride and strength, but among those whom the graduated veterinary surgeon should be ashamed to resemble,—the farrier, the quack, the cow-doctor, or the doctor of every disease?—each possessing secrets known only to himself—a kind of hereditary proprietary, which none of his compeers—no, not even the best qualified veterinary surgeon—can have any pretension to.

And do these few practitioners, who object to the publication of the cases that come before them, desire once more to banish us to the shades of superstition and ignorance? Do they think that in this age of improvement they can limit the attainment of knowledge to a privileged few? Are they really blind to the fact, that the majority of agriculturists are now employing the qualified veterinary surgeon in decided preference to the pretending quack? Do they ever read the periodicals of the day that have reference to human medicine? Do they not find the symptoms, causes, and treatment of every disease plainly and distinctly pointed out, and by men whose names stand foremost in this and every preceding age? Did we ever hear from one of them the expressed wish that these works should only fall into the hands of those of their own profession, or a fear that, by the perusal of them, every man would become his own physician or surgeon? No! It never entered the mind of him who had the honour of his profession or the welfare of his fellow-creatures at heart.

The time for exclusiveness is now for ever gone, nor is there the man who can build up the crumbling ruins. Let no private grudge stifle the better feelings of the practitioner or the student; but if *THE VETERINARIAN* and "The Association" are to be separate and distinct publications, let the managers of each never forget that they are bound to guard the interests and uphold the honour of their common profession. There may be room for both—at least there will be opportunity for both to prove that they are not unworthy of the cause in which they labour.

In my opinion, the whole of the affair has its origin, not in any anxiety for the good of the profession, but in the worst spirit that can actuate the human mind,—*revenge*. Mr. Copeman's letter is fully to the purpose with regard to this: but, Sir, heed them not, nor their low machinations: their rivalry will be an advantage

rather than an evil, and your Periodical will be supported in defiance of all opponents\*.

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*From Mr. JOHN KENT, Bristol.*

Dear Sir,—I have regularly taken in *THE VETERINARIAN* from its first number to the present. When it first appeared, I felt fully persuaded that it would raise the reputation of our art, by promoting the science of those engaged in its practice. Every succeeding year has confirmed me in that persuasion; and now I consider it to be the mainspring of the machinery by which veterinary science in England is propelled; nor do I doubt that, by pursuing the course in which you have hitherto moved, *THE VETERINARIAN* and veterinary science will successfully advance.

I believe that you suggested and carried into effect the formation of the Veterinary Medical Society of 1813. I was among the first members who joined it. No one could be more zealous than yourself in the formation of the new Veterinary Medical Society in 1836. I always thought, and still think, that these meetings are calculated to be, and are, the most efficient means of advancing science and elevating our profession; and I am sure that you, by recording their proceedings in *THE VETERINARIAN*, confer a benefit not easily over-calculated on every veterinary surgeon who reads its pages, whether he is aware of it or not, and without the chance of injury.

My advice, Sir, is this,—go on in the same course, and the profession will be your debtors.

I am not much troubled with a prurience for writing for the public eye, but will occasionally contribute something to *THE VETERINARIAN*; and shall feel no hesitation in speaking in plain terms, and let the cowleech, the farrier, and the farmer, make what use they can of it.

The cowleech, the farrier, the farmer, the amateur in horse-flesh, the sportsman, the groom, and I may add the physician and surgeon (and not excepting those who compose the Board of Examiners, and whose names are appended to the diplomas of veterinary surgeons), must have a name for every attack of disease, and a recipe, or at best a plan of treatment. This cannot

\* There are some inaccuracies, in my last letter as reported by you, which I could wish to have altered. In page 489, line 7, for "*some* little use," read "little use." In page 490, line 11, for "these cases of *difficult labour*," read "these cases of *inversion of the uterus*." In the drawing of the rope that goes along the back, this part includes the labia pudendi, &c., instead of being marked in the proper place—the short eye formed between where the tail is marked, and the part that goes along the belly.



be given, and I am quite certain, that if a committee, or medical staff, composed of one of each of the above, were formed, and aided by "Blaine's Outlines of the Veterinary Art," "Percivall's Hippo-pathology," and *THE VETERINARIAN*, and a hundred patients before them, they would not as a body, or individually, be able to ascertain what part of the animal was suffering disease, nor how to treat the patient advantageously for disease, if they knew what was amiss.

To be afraid of publishing in *THE VETERINARIAN* and to the world, the symptoms, treatment, and termination of cases of disease, is little better than to tell the public, that I, a veterinary surgeon, have some famous books, which tell me the names of all diseases, and a receipt for every one of them; and if you could but get those books without further trouble, you could be your own doctors, and not only cure disease for yourselves, but teach others also. Happily, however, for the scientific and industrious part of our profession (and equally so for other professions), no teaching at the Veterinary College, nor a diploma, however well earned, can do more for its possessor than to obtain for him an introduction to practice, and qualify him, by the knowledge he has obtained in his pupillage, to trace disease by its symptoms or external indications, and apply remedial means to obtain and preserve a reputation worth having, either as to respectability in society or as to pecuniary returns. Persevering energy in the pursuit of knowledge, and a continual watchfulness of the symptoms of disease and the effects of medical agents administered during life, and in examining the diseased appearances after death, are absolutely necessary; and the pupil or practitioner who pursues such a course has nothing to fear from those who are only book-doctors, nor from practitioners on the human subject, who from reading, &c. may describe the symptoms of disease in the dining-room or drawing-room, but only see a sick or lame horse occasionally.

The candidate for success in practice as a veterinary surgeon, who, on having obtained a diploma, blesses himself that the turmoil and anxiety of study are over, will find that he has miscalculated the matter, and that, instead of the race being finished, it is only about to begin.

In reducing what he has learned at college to practice, he must be more than a "Sir Isaac" who does not soon find that he has much to learn, and difficulties in practice which no books can help him out of; or he must be so stupidly blind, as to be incapable of ever becoming a man of experience.

It has been my undeviating practice from my outset to point out to my employers what was amiss with the patient, and, in

serious cases, the symptoms which, in my opinion, proved the existence of that disease; and always, when asked, without hesitation I have told what medicine I should give—not the quantities—and have never yet wished that I had done otherwise. I have, in consequence, in a few instances, from disapprobation expressed of my plan, refused to undertake the treatment of the patient, and, as far as I ever knew, with advantage to myself.

Would a veterinary surgeon possessed of mental and acquired ability in his profession, allow a sick or lame horse of his own to be treated for the ailment, whether sickness or lameness, or whatever may be amiss, by any person indebted for all his medical knowledge to books, and whatever he may add to it by occasionally seeing a sick or lame animal, or even to a surgeon or a physician? To suppose that he would, is to disgrace us as a body; and if we stand on no better ground, we ought not to be respected or employed: but I know that it is otherwise.

In our profession, as in others, there are those who creep in by the back door, and such have reason to fear lest the public should esteem them according to their desert. There may be some of better standing who may be unnecessarily alarmed; but a man of moderate ability in his profession will, by diligence and observation, be always superior to the empiric.

If a man, carrying a book in his pocket—no matter by whom written—can enter a stable, &c., look at the animal, ascertain what is amiss, and treat it as well as another who is educated and in constant practice, let him do so, for he must be (if not a witch) a wonder in the world; but if he is not this wonderful personage, the public will find out the point at which he ought to be rated, and the result as to his injuring the scientific practitioner may be easily predicated.

Would you or any other sensible veterinary surgeon in town or country undertake the treatment of sickness or lameness of a serious character in the horse or other animal, and hold himself responsible in blame or money on the representation of a very diligent reader of the authors before recited?—nay, would he not hesitate to prescribe on the report of a veterinary surgeon, if a stranger to him? Would he not proceed with caution, and question the reporter, not whether the case was one of pneumonia, or pleurisy, or enteritis, or gastro-enteritis, but what symptoms of disease were apparent, and by those symptoms determine not only the particular disease, but the intensity of disease? Refuse the statement of symptoms, and he would refuse to prescribe. In my opinion, the man who practises on report is no better than a quack.

If every attack of disease could be distinguished by a name,

and that name conveyed the nature, extent, and precise progress of the disease, from the first deviation from health to its termination in death, then all that any man could obtain by reading cases published in *THE VETERINARIAN* would only be the name of a medicine, unless so much of a certain prescribed kind would begin and accomplish a cure ; but this is not the case. I am called to see a horse :—he has been ill, no matter how long ; symptoms of disease alter with the increased intensity of it, and I must take things as I find them (no book can help me), and my reputation hangs on the accuracy of my judgment as to the nature and extent of the disease. A very early question asked is, Will my horse live or die ? The result at no distant period will prove the accuracy or not of the answer given. In nearly the same breath comes the next important question, What is amiss with my horse ?—and as death will sometimes ensue, the worth of my judgment is ascertained : and, should I have been in error, the mortifying and not very good-tempered observation comes with cutting keenness,—“ You see, sir, that you did not understand the complaint of my horse, therefore you could not treat him properly.”

If I convince my employer that I am aware of what is amiss during life, and am not doubtful in my own mind as to the proper method of treatment, and hold out no hope, or but faint hope, of recovery, and death ensues, then comes the post-mortem examination, and on the accuracy of my prognosis depends the estimate formed of me as a practitioner. Neither reading nor occasionally seeing a case of disease can prepare any man, whatever may be his mental ability, for such a position as this ; but it is not the only occurrence in which a practitioner feels a need for all the knowledge he can obtain by diligent perseverance to the end of life.

On the other hand, the empiric, or farrier, or the reading doctor, with the best books on our art in his hand, whether those already spoken of, or the “ Horse,” “ Cattle,” &c. proceeding from your own pen, is sure to get into a dilemma, the frequency of which must be proportioned to the number of ill-fated animals that fall into his hands ; and the proprietor, not feeling quite easy when the prospect of death stares him in the face, whether himself or a farrier is major of the bloodstick, in his alarm sends for a veterinary surgeon. This brings science (I mean science made available by practice) into collision with ignorance, and, in my opinion, gives to the veterinary surgeon all the opportunity he ought to wish of holding his proper position in the estimation of those who require medical aid for their domesticated animals from the horse down to the cat.



Here a diploma gives to the veterinary surgeon the vantage ground: but to preserve that position he must be a scientific practitioner. His diploma cannot cure disease, nor whisper into his ear what is amiss, nor direct him how to treat his patient. All this must be known; if not, his diploma, not having made him wise, will never make him rich. It is by no means necessary that a veterinary surgeon should be *a cure-all*; it is only necessary that he should be what he professes to be: then whether his patient recovers or not, his reputation is safe, and with that he can obtain more. This also will be in some measure proportioned to the opinion formed by his employers of his ability. I do not speak theoretically, but from practical experience. When I am called, I feel no hesitation in saying, "Your horse must die," although much more pleasure in telling my employer that "he needs not to feel very anxious, for I have little or no doubt that your horse will recover." It is my uniform practice to tell my employer what I think of every case that is brought to me.

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*From Mr. M. E. NAYLOR, V.S., Wakefield.*

— I do fervently hope that THE OLD VETERINARIAN will remain to us for many a long year to come, and that the complement of communications to it, will never be essentially diminished. As to the manner in which these communications are made, I confess that I care little; for I am confident that nothing will find its way into that work which can materially injure the cause of veterinary science. As to its present effect in the way in which it is conducted, and the kind of persons into whose hands it principally falls, I have quite settled that matter in my own mind. I have made it my business to inquire of some of the old farriers in my neighbourhood who I know used to read THE VETERINARIAN. They take it no longer; and they give me this as their reason—that they cannot understand many of the cases reported; and that the expense is so great, that they have discontinued the work altogether.

As to the number of works published on veterinary subjects, I wish there were more of them of the proper kind; for when I find any of them in the hands of my employers, I am sure that my attendance on the case respecting which I am consulted will be pleasant, and, nine times out of ten, successful. I never fear the well-informed man. I soon find in him a friend, as well as a constant employer. It is when persons have taken no pains, or have had no opportunity to inform themselves on these matters, that the empiric retains his pre-eminence.

Still I can and do most deeply enter into the feelings of those who have been so much injured by the circular of Professor Sewell. They have indeed been injured, and some years may pass before the practice on cattle which they once possessed will return to them: but it will return sooner or later. Let the veterinary surgeon endeavour to identify himself with the agricultural society in his neighbourhood—let him be always at his post in their meetings—let him make himself better acquainted with the subjects that are, as it were, common property between them, and he may be assured that he will soon find the advantage of his connexion with them. To express much anger at that which has passed would be worse than useless—it would be folly. The veterinary surgeon has suffered, and unwarrantably; but the prospect before him is becoming favourable. Let him mingle among farmers—let him convince them that he knows a little of his own business; and, much sooner than he at present dares to hope, he will be respected and employed, and that to an extent which he has scarcely dared to anticipate.

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*From Mr. M. POTTIE, Yoker Distillery, Glasgow.*

On receiving the July number of *THE VETERINARIAN*, I felt a little surprise at finding that there was so much dissatisfaction among a few of the profession respecting the publication in a scientific work like *THE VETERINARIAN*, and in a plain and straightforward manner, of certain cases of disease. I have yet to learn that secresy, in any profession, can be its legitimate or effective pillar of support.

It seems that we have a battle to fight, and a field to conquer, and that we can only accomplish our task by enlightening and making converts of our enemies, for the greater part of them are enemies only through ignorance. The want of harmony that has, of late, prevailed among us is founded entirely on a mistaken view of things. If, from want of thought in him who ought to have been the guardian of our interests, too many of us stand in a different situation from that which we used to occupy as it regards the treatment of cattle, we have only to wait a little, and the confidence which used to be reposed in us will assuredly return. We shall only make a bad matter worse, by injuring and defaming our brethren. If mischief has been done by ill-advised circulars, we are only increasing the evil when we are jealous of one another, and, instead of supporting the profession, degrade it. The habit which some of us have formed of looking with an evil eye on our brethren, and lauding our own merits at the ex-

pense of those of others, has done more injury to the profession than all the circulars that were ever sent abroad.

I have often heard Professor Dick reprobate the concealment and mystery which shrouded the practice of so many. He used to tell us, that those who knew most of the diseases of our patients would be our best and most attached friends; and every day's experience confirmed the truth of this. The Professor used to deliver a course of lectures in the winter season which was attended by many of the members of the Highland Agricultural Society spending their winter in Edinburgh. What was the result? On their return to their country seats, did they become their own veterinary surgeons, and give any encouragement to the groom, or blacksmith, or country cowleech? No! but they urged on the agricultural associations in their respective districts—and almost every district in Scotland had its agricultural society—the propriety of attaching to themselves one or more veterinary surgeons who might be within their call in cases of disease. It is in consequence of this that there are so many regularly educated veterinary surgeons throughout the whole of Scotland, the greater part of whom obtain a respectable livelihood.

Before this, with the exception of a few contributions by Professor Dick, to the Quarterly Journal of Agriculture, our art may be scarcely said to have had existence in Scotland: and now, from north to south, it is plentifully supplied with educated surgeons. In our public libraries, also, *THE VETERINARIAN* and other veterinary works stand, as they should, by the side of the publications on agriculture, and I do not think that these works have in the slightest degree lessened the practice of the veterinary surgeon, but quite the contrary. There may be a few farmers who depend on their own sagacity, or the knowledge of some quack; and when they do employ a veterinary surgeon, it is after all their nostrums have failed, and the patient is near to its long home.

I have always thought that the less we have to do with such persons the better, for we are sure to be the scape-goat, laden with errors and almost with crimes not our own. As to the publication of the Veterinary Medical Association along with *THE VETERINARIAN*, in my opinion it is just what it should be: but what has become of many of the old practitioners who once took part in the discussions?

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*From Mr. JOHN STORRY, V.S., Pickering.*

My dear Sir,—Your appeal to your correspondents and the profession generally on the propriety and desirableness of continuing the publication of *THE VETERINARIAN* free and open to all the world, meets, I am happy to say, my entire approbation. I am proud to acknowledge that I have derived great advantage from the valuable communications of many of your deservedly respected correspondents, and have been delighted to find that year after year it has been advancing in interest and usefulness to the profession of which it is the acknowledged organ; while to the public generally it has in some measure been acceptable, and in many respects useful.

Although many errors may have been committed in too plainly describing the symptoms and treatment of certain diseases, so as to give an opportunity to the ignorant pretender, or the interested or rather selfish farmer, to attempt the cure of his own stock in certain cases, yet I am of opinion that this will be of short duration; for by numerous failures and losses in the attempt to cure them, of which I have seen many a proof, I am satisfied that it will ultimately and reciprocally prove beneficial to the regular practitioner and to the farmer also. To the former, by his skilful treatment of the many varied and complicated disorders which frequently occur; and to the latter, who, having failed in his expectations of a cure, and perhaps suffered severely for his ignorance and folly, will be the more ready to confide in the superior skill of his professional attendant.

If we have, Sir, in some instances written out peculiar cases in too plain a phraseology to be misunderstood, yet I contend that nothing but the grossest ignorance and selfishness could induce the farmer to assume that he himself can be competent (with the assistance of a few recipes, picked up God knows how, for various disorders) to exercise the requisite skill, in order to ascertain the symptoms that precede and attend the different stages of certain diseases, so as to be able to judge of the suitability of the medicine he is about to administer. Repeated failures and losses must follow, until he loses all confidence in himself and the recipes he has made use of, however eminent the name whence they emanate. I have had practical experience of this result in several cases, and will just name one out of many similar ones.

A farmer in our neighbourhood, whose stock I had attended for several years when necessary, and who, by the success almost invariably attending my practice always seemed to be perfectly satisfied, had, however, been induced to try the efficacy of some recipes that had been denominated infallible cures for certain

disorders; but by his first attempt in this way he lost a valuable milch cow, and two others were taken ill a few days afterwards. He sent for me to attend them, and in a few days, by proper treatment, they were both recovered. Now I am quite convinced that my neighbour will no more attempt to be his own "cattle doctor."

I must now briefly notice the epidemic which has been so prevalent of late. I hardly need to say that it has also made its appearance here as well as in other parts of the kingdom. It does not, however, always begin by one invariable symptom. In some cases very little fever appears; in others, strong symptomatic and catarrhal fever are visible, which require both skill and practice to distinguish, and never can be successfully treated by one and the same medicine. My treatment, of course, varies according to the symptoms, and it seldom happens that I can treat two patients exactly alike; some cases requiring aperients and cordials, and other febrifuges, sedatives, tonics, &c.

I have thus given you a brief but candid opinion on the points in dispute on the publication of *THE VETERINARIAN*, although I am not aware that it will be of much use after your lucid and well-adapted remarks on the subject, followed by the efficient assistance of such a host of intelligent correspondents.

I cannot doubt, however, that those who have taken a different view of the subject (and, I readily admit, from a belief of their necessity for the interests of our profession), after maturely considering both sides of the question, will admit that the interest and respectability of the veterinary art will be best upheld by being free and open to all the world.

Hoping, my dear Sir, that these differences may speedily be adjusted, and that unity of purpose and design may again be restored among us,

I beg to subscribe myself, &c.

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*From* WELTER.

Sir,—The question whether the diffusion of veterinary information among the owners of horses and other quadrupeds tends to deprive the regular practitioner of a few pounds per annum, or the reverse, I, of course, cannot solve. The different members of the Association are by no means unanimous. I have kept horses for many years; and for some years, while resident in the far East, I was obliged to trust to my own knowledge—or ignorance I may, perhaps, be told—in the veterinary art; and, from being more presumptuous than many of my friends, I was consulted by

them on all matters relative to the horse and dog; and I really believe that, had I set up as a practitioner, I could have realized a comfortable income. That I was successful in many cases—that I even operated freely with the knife, the lancet, and the iron—the actual cautery is a favourite remedy for horse or man—and with success, is a fact attributable, perhaps, to luck.

But, you may ask, To what does all this tend? simply that, located near to a member of your profession, one whose character for ability stands deservedly high, I *never* trust to my own knowledge; but in case of illness, lameness, &c. I immediately send off for one who I feel persuaded must, from his education, know a great deal more on the subject than I possibly can do.

I am a regular reader of, and subscriber to, THE VETERINARIAN, and shall be sorry to see so able, and, to me, interesting a periodical discontinued, or much altered in its arrangements.

As to the suggestion of writing the prescriptions in Latin, that, I think, would not check the spread of knowledge; for any chemist or chemist's lad could turn them into English, or Leach's Grammatical Introduction to the London Pharmacopœia might be used for the purpose.

In addition to THE VETERINARIAN, I have a tolerable collection of works relative to horses, &c.; and, as far as my memory goes, I think I may state that all amateur writers—and Nimrod at the head—though 'tis true that he and others tell one what to do under certain symptoms—advise, on the appearance of any illness, to send off instant for the ablest veterinary surgeon in the neighbourhood.

The knowledge to be acquired by a constant and careful perusal of the pages of THE VETERINARIAN is, undoubtedly, considerable, and highly beneficial to those having horses and other quadrupeds in certain of our colonies, where regular veterinarians are not to be met with, or who reside at such distances as to render their services wholly unavailable; but, for general purposes, other works treating of the diseases of animals would be consulted as easier of reference.

Turner, some years ago, published a book on the Foot of the Horse, fully describing more especially the navicular-joint disease, its treatment, &c. Has he had fewer cases sent to him in consequence?

But it is not alone on account of his professional knowledge that I apply to a veterinary surgeon; it is also on the score of economy. I am a younger son, with a younger son's pittance, and, mayhap, with a younger son's passion for horses and dogs, and it is to save my pocket that I invariably send for my friend, who never hesitates to tell me what he is about to do; while a quack



has always some secret which he will not divulge, for fear I should not in future call him in.                      Your's,

WELTER.

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[If we guess aright, we think we have a tolerable recollection of the penmanship and the style of writing of "Welter." There cannot be a better judge of the question at issue. A more ardent sportsman and a more honourable man does not live.—Y.]

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*From PROFESSOR DICK, Edinburgh Veterinary College.*

My dear Sir,—I perceive by your leader of last month, that some of the profession are of opinion that you are too liberal in the "diffusion of useful knowledge." They think that, if the "schoolmaster is abroad," he must be called home, for their own especial and exclusive benefit. They wish to set themselves up as monopolists of veterinary science, and think that none should derive any advantage by it except themselves.

Now, I cannot help thinking that this is an extremely narrow-minded view of the subject, or, indeed, of any subject: and what they would here attempt on a smaller scale, is one of those objectional schemes which we are at this moment trying to abolish on a larger in the foreign policy of the country; for you must know that I am an anti-monopolist. The corn and sugar monopolists are contending for the same principles. They are afraid that any one may undersell them, instead of throwing the market open, and trusting to the superiority of their goods for keeping a worse article out of the market; nay, they would rather take less profit with the monopoly, than, by increasing the consumption, and consequently the demand, benefit themselves as well as others.

Such is always the effect of monopoly: it leads to indolence, the production of a worse article, and diminishes the demand. And such would be the effect of the adoption of your correspondents' suggestions. It would, in my opinion, be a more liberal and better policy to increase the scientific nature of their communications, thereby shewing to the world that they have not studied in vain, but have acquired a knowledge which they can apply usefully for those who require their aid; and also shew, by the superiority of those communications, that that knowledge can only be acquired by lengthened study and careful investigation. By such means the superiority of the scientific practitioner over the mere quack must become obvious, and point out the propriety of employing him in preference to the other.

Veterinary knowledge is not surely so easily acquired, that a

common reader can, on perusing the account of some isolated cases, be enabled to become a veterinary practitioner ; otherwise it has been to little purpose, and it has been great folly to have said so much about it : but if, after twenty or thirty years' practice, some daily find new matter for investigation, we need not fear to be outdone by publishing some of those cases as they occur.

Your correspondents, however, are by no means solitary in their views, however narrow they may be. I have among my pupils some who have urged me to increase my fees. They have said that the sum is too low, and that it leads to opposition. No doubt it must have such a tendency ; but a little opposition is the soul of business—it increases the energies of those engaged, and produces general good. Man is not made for himself alone. He is intended to be one of a great family, of which every member ought to do his duty ; and that is, to contribute to the good and comfort of every one as well as himself.

I am afraid that the proposal of raising the fees at the London College and the agitation regarding the charter have stirred up some of this feeling, as the same principle is involved in both propositions. In order to shew that the effect is not what is anticipated, and that the diffusion of a knowledge of our art does not always injure it, I will relate what occurred some years ago, when I was in the habit of giving a course of popular lectures every spring. Among those who honoured me with their attendance, was a baronet, who after having completed two courses, sent for me one evening in haste, to see one of his carriage horses. On my arrival I found that there was only a little fever, which had been preceded by a slight shivering fit, and that there was no occasion for alarm. On my telling him so, he said, “ Before I attended your lectures, I thought my horses should never be wrong ; now I am only surprised they are ever right—and it is always best to apply in time.”

As a contrast of this, I remember an old farrier, who was so much the quack, that when he was about to give a clyster, after having got the gruel or hot water placed in a basin (previous to putting it into the old pipe and bladder), was in the habit of wrapping his coat round the basin (to prevent any one seeing), and stirring in some colouring matter, in which he wished it to be supposed resided the whole virtue. Although in those days he had considerable practice, he was laughed at by his best friends for his secresy, and only tolerated in the absence of more liberal-minded practitioners.

This country has not, however, arrived at that high state of civilization and morality, that every individual does unto others as he would be done to ; and among those with whom the veterinary practitioner comes in contact, there are too many who do

the very reverse. It is, therefore, necessary in some measure to guard the interests of our profession ; and while I would prefer the natural protection which highly scientific and practical attainments, tested by public examinations, will give, I must, in the present state of society, agree in the propriety and advantages to all parties which a charter would afford. While, however, I would agree to this step, *which is a demand for a monopoly*, I must, at the same time, state that, if we were to couple with that a system of exclusive dealing and secresy, this would be a retrogression in civilization which is inconsistent with the general onward progress of society, and which the authors are a full century too late in propounding.

It appears to me both impolitic and impossible to follow out the propositions of your correspondents ; and I am satisfied that, if the public take the interest in the matter which it is supposed they do, there can be no doubt that whether we supply the desired information or not, the demand will be supplied from some quarter. Some valued members of the profession may object to the open avowal of the leading principles of our art ; but others will come forward as time and opportunities serve, to supply their places, and, by acquiring a character with the public, will either gradually *draw out* those who wished to be exclusive, or will to a great degree supplant them in the extent of their practice.

The principle which has been suggested, if followed out, would lead to the extinction of *THE VETERINARIAN*, and of all vehicles for the communication of knowledge. If a practitioner has met with some valuable case from the study and treatment of which he has derived considerable information, he may perchance ask, Why should I tell every one, or even my nearest neighbour, what I have discovered ? Let him try what he can do, and, when he is fairly baffled, I may probably be called, and thus gain an advantage over him, that may raise my fame, and recruit my pocket. Let this be the course generally pursued, let this be the principle and the conduct of the veterinary surgeon, and the public will soon come to the conclusion that we are all a set of quacks together, for the characteristic of quackery is secresy. Such a system would retard the progress of knowledge, and consign to oblivion many a useful principle and fact.

In order to shew the advantage of a medium of communication between the members of the profession, I will relate a case which I consider unique, and which would probably have remained unknown, but for the opportunity afforded by your Periodical. I was requested to examine a horse's foot, in March last, which belonged to one of the principal contractors for the Edinburgh and Glasgow Railway. The horse had been at work about ten days previously on the line, and had had his foot crushed between the rails and the wheels of one of the waggons.



I found him lying at his length, and his body chafed severely in several places, from his ineffectual struggles to rise. Suppuration had taken place round the whole of the coronet—pus had formed, and was discharged at several openings; and there was every appearance of the hoof soon sloughing off. He was a valuable five-year-old cart horse, and had only been purchased about three weeks previous to the accident. He had been attended by a farrier, and, as there seemed no prospect of amendment, it was intended that he should be destroyed; but before doing this, it was determined to consult me.

My opinion was, that he might recover, and become useful, although with some deformity of the hoof. The probe indicated that the coffin-bone was either fractured, or a portion of it exfoliating; but I expected that, when the portion of bone was removed, the part would heal up. In order to effect this and relieve the animal, as much of the hoof was removed as possible; the swelling round the coronet was punctured with a lancet in several places, in order to allow the free escape of the matter; and the foot was enveloped in a bran poultice, which was changed twice every day.

As nearly one-half of the hoof was removed, and the pressure thereby relieved, great mitigation of pain was speedily afforded. The inflammation began to subside, and the outer alæ of the coffin-bone became detached, and was removed. There still, notwithstanding, was found a small portion of bone in a state of exfoliation, but so fixed that it could not be removed. Time, however, with the injection of gentle stimulants and soothing poultices, ultimately promoted the detachment of the portion of bone, which, on enlarging the orifice, and laying hold of it with a pair of forceps, and drawing it out under the coronary ligament, proved to be the *entire* navicular bone, which had separated from its attachments, and was moving horizontally towards the outside quarter of the foot. A small portion of bone soon afterwards sloughed from the anterior process of the coffin-bone, and the whole of the sinuses are now healed up,—the hoof sufficiently grown to allow a shoe to be put on ten days ago, and the horse standing and walking on it with great freedom. He is now at grass, to allow time for the hoof to grow and the foot to acquire strength, before he is put to work. When the hoof has fully grown, there is every prospect of there being little or any deformity of the foot or coronet.

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*From W. F. KARKEEK, Esq., Truro.*

Dear Sir,—I have carefully read the letter with which you favoured me, and the remarks of Mr. Morton on the present state and future prospects of the veterinary profession. It appears to

me that this gentleman has lived long enough to dread the fulfilment of his own prophecy, that "Science will plant around the sacred precincts her own bulwarks;" but, notwithstanding this alteration in Mr. Morton's opinions, it is very evident that, if the concluding part of the same prophetic sentence had been fairly maintained by the members of our profession—if we had been but true to the interests of our profession and ourselves, the consequences which are now so much dreaded would never have been imagined. Even now I cannot help thinking that a great deal of Mr. Morton's fear respecting of this bulwark being thrown down, and the fair field of science trodden under foot, really exists more in imagination than in reality.

It cannot be denied that the first person who set the example of tearing down the barrier was our own Professor, when he sent forth, or allowed to be sent forth, that circular of his respecting the Epidemic among cattle, sheep, &c. I was fortunate enough to get one of the first of these circulars, through the kindness of one of the governors of the English Agricultural Society; and foreseeing the effect which such a document would have on my private practice, I immediately published a letter in the two leading newspapers of the county, giving a detailed account of the symptoms, and treatment to be pursued. The consequence was, that I directed the attention of the farmers whose cattle were diseased, from Mr. Sewell's circular to mine. It suited my purpose excellently well; and, had I not done so, I have every reason to believe that the druggists and empirics would here, as almost every where else, have had the lion's share.

Such proceedings, however, on the part of the Professor or the profession are not likely, I trust, to occur again. I believe that Mr. Sewell acted from the best motives, and I acted only in self-defence.

But now, with regard to the proceedings of the Veterinary Medical Association, it cannot be denied that they form a very valuable part of *THE VETERINARIAN*, and that the opinions of the metropolitan veterinarians in the different discussions, when they do make their appearance, are of great utility to the country practitioners; but, on the same principle as those to whom Mr. Morton alludes would refuse to have their opinions recorded, the latter may refuse, although with just as little excuse, to send their papers and cases to *THE VETERINARIAN*. I am sorry that such a question should ever have been agitated. It can do no good: but where bad feeling, from whatever erroneous cause it may arise, prevails, the trifling and superficial wound which at present exists may degenerate into an ill-conditioned, cancerous sore. Ill-betide those, and they will eventually bitterly repent of their proceedings, who are instrumental in effecting this. *THE*

VETERINARIAN never met with the encouragement that it deserved from those who called themselves the heads of the profession. Unwarranted agitation, even if there were some cause for displeasure, might, under present circumstances, be productive of considerable mischief.

As to the plan of Mr. Morton, that members should give their opinions freely, but clothed in language only understood by the educated and scientific man, I fear that it would with difficulty be carried into execution; for we have already a tolerably goodly number of hard words in our professional writings, which serve no other purpose than to occupy a large portion of the student's time and burden his memory: still I acknowledge that there is no necessity to speak quite so plainly as some of our correspondents occasionally do.

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*From Mr. W. PERCIVALL, M.R.C.S., & V.S. 1st Life Guards.*

I did not see the August Number of THE VETERINARIAN until last night. If I understand you aright, you desire to know *what I think about the publication of cases and recipes in THE VETERINARIAN, in regard to the interests of the practising veterinary surgeon.* As a military veterinarian, and one that has never been in private practice, my opinions, I fear, can have little weight; still, since you have expressed a wish to have them, your desire shall be complied with.

Nearly allied as we are in science to human medicine, and alike in many respects as our courses of practice are, it is natural for us to inquire into the current opinions of surgeons on the same subject. We find the medical journals promulgating without any reserve whatever, and, I believe, without any exception among them, cases and formulæ, and we hear no complaints made against them for so doing. Why, then, are veterinary journals not to do the same? There appears a reason why the same asserted "harm" is not likely to accrue in an equal ratio in the practices of the human and veterinary surgeon; and that is, that inasmuch as, in humanity, the life of a horse will not bear comparison with the life of a man, as the laws of the land take cognizance of the former and not of the latter, so a person will feel disposed to tamper with one, when he dares not meddle with the other. The sole consideration with a worldly-minded man, when his horse happens to be sick or lame, is, how much the animal cost, or is worth to him, and to what amount the doctor's bill is likely to run, should he call in a veterinary surgeon; and again, whether or not he, with some favourite recipe of his own, is not



likely himself to work a cure. Should the horse be a valuable one, and should his owner, by dire experience, conceive in his own mind that by his own treatment he shall injure or destroy him, the veterinary practitioner is likely to be sent for; otherwise, and particularly when the question hinges upon poor humanity, I am afraid the purse is likely to get the better of the doctor.

The ostensible object with which a professional journal is originated, and on account of which it solicits support, is, that it may serve as a medium of communication between the members of the profession to which it belongs, and that in it they may, monthly or weekly, hold a sort of correspondence, by letter or otherwise, by which all may benefit, though only such as are able, or have inclination or time, contribute to it. So long as the circulation or sale of the journal is confined to the members of the profession, there assuredly ought to be the most unreserved communication: for one man to withhold his opinions and recipes while he is benefitting by those of his fellow-practitioners, is illiberal and ungentlemanlike in the extreme; indeed, it is conduct for which he deserves to be scouted by his professional brethren. But the editor of the journal perceives that the issue of his periodical is augmenting—that the number sold is greater in amount than the professional subscribers—that, in fact, the periodical is circulating among the laity as well as the professionals. And, now, how goes the question about “unreserved communication?” Are we to put every groom, horse-dealer, farmer, and grazier, in possession of our recipes, that they may, with these very weapons, combat us, and do us injury? Are we to tell them that so much cantharides, &c. constitute our blister; and that our purging, and urine, and fever-balls are composed of so and so? And yet, if we are, in our relations of cases, and dissertations on pathological subjects, to omit every thing concerning treatment, how much shall we strip these accounts of their value! What, then, is to be done?

Between suppression on the one side, and divulgement on the other—between this Scylla and Charybdis—I should say

“In medio tutissimus ibis.”

I should counsel the contributors to *THE VETERINARIAN* to give their pathological papers, and their narrations of cases, every attention in respect to history, causes, symptoms, post-mortem appearances, &c.; and when they come to the subject of *treatment*, merely to mention that “the treatment was such as is usual in such cases;” or that it consisted in cathartics, diuretics, anthelmintics, febrifuges, vesicatories, discutient or evaporating lotions, &c. ;” or should it be required to specify any particular

medicine, that it be named according to the nomenclature of the latest edition of the Pharmacopœia of the College of Physicians of London, Edinburgh, or Dublin; it being, in certain cases when requisite, stated which authority is followed.

I remember, several years ago, that one of the medical journals found fault with some of its subscribers for giving their formulæ in Latin, deprecating the custom of our forefathers, and recommending the discardment altogether of the Latin language out of our pharmacopœia. I do, however, for my own part, think there ought to exist a sort of free-masonry among professional men, and that we ought not to descend to the level of cookery books in our practical communications; and I feel quite certain that, as far as surgeons and physicians are concerned, their prescriptions possess more value and efficacy in Latin than they would in vulgar English; and, as far as even *our* practice goes, I can have no doubt but that the world will give that veterinarian credit for knowing more who is able to give a recipe in Latin.

If a man should bring his horse to me with a saddle-gall, and I should desire him to keep it wet with salt and water, he would go away not only dissatisfied, but probably, in his own mind, set me down for a common-place or very indifferent sort of practitioner; but if I made a mountain of his molehill, and, with grave countenance and demeanour, told him I would give him a prescription for it, which would be certain to set all right again in a few days, and enable him to ride his horse again, presenting him with

R Sodæ chloridi .....	℥ij
Aquæ distillatæ .....	Oj
Tincturæ lavandulæ c. ....	℥ss.
M. f. lotio sæpissime applicandum parti affectæ,	

he would leave me highly satisfied with me and my infallible prescription—which the *druggist* would be sure not to enlighten him about—and would, no doubt, come again the next time his horse might happen to have “a lump upon his back.” This may be called “humbug,” or “moonshine;” but I will vouch for it, there are few in practice but what have discovered some necessity for such said humbug. If the art of medicine stood simply and solely upon plain “cause and effect,” it would not confer near the benefit nor afford half the satisfaction it does at present.

We stop the press, and materially alter the train of argument into which we were about to enter, and, in fact, had entered, in order to insert a letter which, by some chance, was not sent to us until the 26th of August:—

ROYAL VETERINARY COLLEGE, AUGUST 20, 1841.

Sir,—I have the honour to acquaint you, that at a meeting of the Council of the Veterinary Medical Association, held at the

Freemasons' Tavern, on the 18th instant, Mr. Assistant-Professor Spooner in the chair, the following resolutions were unanimously passed :—

Moved by Mr. J. B. SIMONDS, and seconded by Mr. FIELD,

“ That the Council are of opinion, that the proceedings of the Association should be no longer published in junction with THE VETERINARIAN.”

Moved by Mr. J. TURNER, and seconded by Mr. T. TURNER,

“ That the entrance fee as a member of the Association be increased to two guineas.”

Moved by Mr. T. TURNER, and seconded by Mr. W. W. BARTH,

“ That means be adopted to ascertain the sentiments of the members of the Association as to the expediency of its Proceedings, for the future, being published on its own account. And in furtherance of this, the Secretary be delegated to address to each member a circular, embodying the above resolutions, and soliciting an early reply, so that the Council may be able to determine on such measures as may be by them deemed conducive to the best interests of the Association.”

I am permitted to add, that should the Council meet with the support they fully anticipate, it is intended to publish quarterly a Journal containing a full report of the Transactions of the Association, and which will be forwarded to those members who may become subscribers of ten shillings and sixpence per annum, paid in advance.

Urging promptness in reply, I am, Sir,

Your faithful and much obliged servant,

W. J. T. MORTON, *Secretary.*

The members of the Veterinary Medical Association have an undoubted right to conduct their proceedings in the way which they deem best. They did the Editor of THE VETERINARIAN the honour to permit him to be, in some degree, useful to them in the early period of their career, and it used to afford him the greatest pleasure, during the first two or three years, to observe the prosperous course which they were pursuing, and the honour which they were conferring on themselves, the Association, and the profession to which they belonged.

If, and during the last year especially, their debates have not been so valuable, nor their progress so assured, they who had borne the heat and burden of the day were the persons who felt most deeply the disappointment of their expectations ; nor was it to be wondered at that they should try one and another



experiment in the hope of still accomplishing their noble object. He who had been leagued with from the commencement would be the first to wish them success, and the first to retire when their object could be accomplished in a surer way and by better men. It will never be his fault if the good feeling which had subsisted between him and the members of the Association is interrupted; at the same time he must confess, that there were some circumstances and times when he somewhat marvelled at uncalled-for petulance and even abuse. Many irregularities were to be expected, considering the strange occurrences that were occasionally taking place hostile to study and becoming conduct. May a happier destiny await the proceedings of the new Association!

The Editor, however, much regrets the allusion to, if not the pledge of, the confinement of the knowledge of the proceedings of the Association to the subscribers. This is not, and cannot come to, good. It belongs to that system of exclusiveness under which all science speedily languishes, and too often droops and dies. Let this be calmly but deeply weighed before it is adopted. Let it not be even suspected that the system of secrecy which belongs alone to the ignorant man and the mere pretender can ever disgrace our profession. The Editor, perhaps, has no right to go farther than to appeal to the expressed opinion of the numerous friends whose letters have enriched the present number; and to add, that he has availed himself of opportunities that have occurred during the last two months to obtain the opinion of many of those who deservedly stand at the head of the medical profession. Not one has hesitated for a moment in the answer which he gave, and the advice which he earnestly pressed on the inquirer, on no consideration to blast for ever the rising prospects of our profession.

During the remaining months of the present year *THE VETERINARIAN* and the Association will be still united. At the expiration of that period, the debates of the latter will have been all reported. *THE VETERINARIAN* will then return to its bulk and price in 1837, and possibly to that estimation, and to that sale, of which it then could boast, but which yearly diminished from that period. Every year was then attended by an increase of subscribers, but from the summer of 1837 by a diminution of them. The Editor states not this because he cared about this diminution while the object which he had at heart was accomplishing, but as answer to certain observations which should never have escaped the lips of the utterer.

He has been promised support by those who have never yet deceived him, who never will deceive, and whose names are an honour to our profession.

There will be no occasion for ill-feeling between the supporters

of *THE VETERINARIAN* and those of the Association, or rather, the objects which both have at heart may be zealously promoted by both. This should be our contest. The Editor of *THE VETERINARIAN* promises that never, without provocation which he thinks he will never receive, shall angry discussion be provoked or kept alive by him. He can appeal to his treatment of former adversaries, some of whom hated and persecuted him the more because they could not wring the slightest reply from him. Perhaps it may not be quite so here ; but there shall be nothing that can disgrace the common cause.

One word with regard to recent events. The disgust which many of our brethren express at some of the proceedings of the English Agricultural Society, and of the Professor of our own College, is natural. They both committed themselves in a perfectly inexcusable way, and dearly has the veterinary surgeon paid for *their* folly. They will not err so again, at least not to so great an extent. The agriculturists, in one sense, are shrewd calculators. They have had time to look about them, and calculate what has been the real effect of this abominable circular, for it deserves no better name. They have lost so many cattle notwithstanding the circular—they have seen their cattle falling away in flesh, and for awhile, and in many cases a long while, their diminution in produce and value.

They have looked around, and they have observed the stock of one or more staid farmers, who were not carried away by the clamour, but still confided in their veterinary adviser. They have begun to calculate a little ; and the comparative number of beasts saved, and their produce saved, and their present condition, have been so superior to those whom the circular was said to have benefitted, that the veterinary surgeon, without comparison, bears away the bell, and thoroughly establishes himself in the confidence of his employer. The veterinary surgeon has advantages in this practice to which the followers of the circular can never lay the slightest claim. He comprehends the whole history of the case ; he can trace the effect of each medicament which he is employing ; while the other has nought but a blind routine to pursue. The effect of this is soon apparent ; the follower of the recipe blunders on, continually doing mischief, until the former, too late, discovers his error ; while the termination of the cases of the other is perfectly satisfactory.

Then what is, or ought to be, the result ? It seems now to be determined that *THE VETERINARIAN* and “ *The Association* ” are to be separate and distinct publications. So let it be. A little rivalry will do no harm. It will put each on its mettle. The object of each will, or ought to, be to guard the interests and uphold the honour of their common profession. They will both have opportunity to do this. Let neither of them be governed

by what Mr. Horsburgh truly designates as the worst spirit that can actuate the human mind—*revenge*. Away with the thought of degradation like this!

We would wish, in future, that our best medical writers should be taken as our guides. The causes and symptoms of disease stated, if necessary, somewhat at length; the mode of treatment always satisfactory, so far as general principles go; and the character and intent of the agents of cure, although perhaps but seldom their combinations or their doses: but a serious consideration of these points will occupy the leading article of the next number.

## ACCOUNT OF THE PRACTICE OF VETERINARY MEDICINE IN THE SOUTH OF FRANCE.

By M. J. LACOSTE, M.V., Caen.

SMITHS, FARRIERS, GELDERS, &c.

[VETERINARY empiricism in the south of France has long been a source of bitter and just complaint among the regular practitioners; and it has been the more galling, since well-instructed surgeons are to be found in or near every town. From the first establishment of veterinary schools in France the pupils have been well founded in the anatomy, physiology, and medical treatment of every domesticated animal; and yet empirics have abounded in every village—so difficult is it to destroy the empire of superstition and knavery.

The history which M. Lacoste gives is a very singular, amusing, but perfectly degrading one. He, in common with all his brethren, deeply feels the injustice which is done; and we ardently hope that his *exposé* will produce some good effect.

Charlatanism has degradingly prevailed in many districts of our country; not attributable so much to superstition, as to the total neglect of the means of instruction. Half a century passed and the education of the veterinary surgeon was confined to the diseases and treatment of one patient only; and he, noble as he is in his nature, and valuable on account of the services which he renders, yet, in the aggregate, far from being the most useful. It could hardly have been conceived to be possible that the agriculturist should slumber for so many years inattentive to his own and the national welfare; but now that he is beginning to be awake to that which so nearly concerns him, let him no longer be deluded by vain pretensions or inefficient measures, but assist in carrying into effect that which the ardent and patriotic founders of the College had contemplated—the legitimate and scientific practice of the vete-



inary art in all its branches. It will be a hard battle, both for the agriculturist and the surgeon, to get rid of the pretensions of the charlatan, and the ignorance and superstition of the proprietor; but, to a very great extent, the cause of truth and science will at no great distance of time prevail. It is prevailing; for the veterinary surgeon is far oftener consulted, respecting the diseases of cattle and sheep, than he used to be, and that mutual good understanding and confidence are rapidly establishing which cannot fail of producing the happiest results.—Y.]

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THE almost daily complaints (says M. Lacoste) which are made by veterinary surgeons of the practice of medicine on animals being usurped by a crowd of empirics—the essential injury which they every day do to the proprietors of cattle, and the serious consequences that would result if an epizootic should prevail through the country, should induce the government, in some material degree, to interfere.

Having practised veterinary medicine during some years in the department of Hautes Pyrénées, I have had opportunity to see the superstitious ignorance which prevails among the proprietors of cattle, and the pretended medical attendants on these animals. In truth, the medical treatment of cattle is that which it was in the times of Solleysel and Garsault, if it has not even retrograded. A veterinary surgeon, established in the little town of Trie, was the first who, in that part of the country, adopted a rational course of medical treatment, instead of the recipes to which the smiths had recourse, and the *charms* and *exorcisms* which certain pretended wise men or sorcerers had established in that town and its environs. The sedentary empirics, embracing every farrier and smith in these rural communes, did not contribute a little by their impudence—always proportioned to their ignorance—to augment the blind confidence of the inhabitants with whom they were brought into daily contact. This frequent communication induced the proprietors to prefer the recipes of these people to the scientific treatment of those from whom alone their animals could derive benefit. The veterinary surgeon who was bold enough to enter his protest against these errors gained no confidence, whatever was his merit; or, at least, if he wished to obtain employers, he was compelled to borrow, and to pretend to use their recipes. The proprietor was as ignorant and superstitious as the empiric. In a great proportion of cases it was his office to prescribe the remedy, and that of the empiric or surgeon to administer it; and then the little confidence in the surgeon soon passed away, for it was not so docile as the empiric.

Some proprietors would, for a little while, submit to the judg-

ment of the veterinary surgeon ; but they were few indeed, and even they were induced, as soon as the surgeon had departed, to administer some puerile recipe dictated by an empiric. On the morrow the veterinary surgeon again saw his patient, and was astonished to find him considerably worse, and that the medicines which he had ordered had strangely produced an effect altogether different from that which he had intended. The proprietor being summoned, denied that he had neglected the slightest circumstance, or had administered any other drugs than those which had been ordered. In consequence of this change of medicine, however, the disease rapidly progressed, and the animal died. That death was always traced to the fault of the veterinary surgeon, who, according to the owner, had acted imprudently or ignorantly ; and the whole of the village and the neighbouring communes heard and believed the tale of the death of the animal, and the supposed cause of it.

The sagacity of the empiric seldom went so far as to distinguish between a certain disease and another that resembled it in its general appearance, although requiring a treatment altogether contrary. It is true, that the art of distinguishing these diseases would be of little consequence to him ; for whatever were the disease, the remedy was the same. Certain excitants and certain tonics, either externally applied or given internally, formed the base of his treatment : and often, the veterinary surgeon, called in too late, or his prescriptions not administered, had to listen to the lying stories of the proprietor and the empiric, and of the thousand cures effected by the means adopted. All the animals treated by them, that had strength to resist the disease and the remedy, were miraculously saved by it ; and after the recovery of the patient there was great care to augment the amount of the danger, in order to render the cure more astonishing.

These observations principally apply to the diseases of cattle.

With regard to the horse, the empiric of the village ordinarily acknowledges his ignorance. The diseases of the horse are treated by the blacksmith of the village, and there is a tacit compact between the two not to intrude on each other's province. The horse not being employed for agricultural services in the south, is comparatively rarely a patient. There are only, and those among the more wealthy farmers, a few mares for breeding mules.

The sheep are rarely attended to at all when they are ill. There are, however, some peculiar diseases among them, which the empiric thinks that he perfectly understands, and for which he prescribes the most ridiculous recipes. Ordinarily, however, the proprietor leaves them to perish without prescribing any thing for them. Whether this is attributable to the little value placed on these animals, or to the belief that these diseases are incurable, I know not.



The pig has an especial medical attendant, who applies the same curative means to every patient: he is the gelder or *langueyeur*, whose duty it is to attend on every day, or when any pigs are sold, and examine the tongue, to see that, enclosed in its frænum, there is no worm—the cysticercus—supposed to be the cause of *la ladrerie*, a species of leprosy, and the exclusive management of which is consigned to him. Whatever malady the animal may happen to have, the *langueyeur* always commences with an inspection of the throat, in which he finds, or thinks that he finds, on each side of the tongue some little vesicles, which he denominates *bechigos* in the patois of the country. He pierces them with his scissors, and bruises them with a piece of silver coin. That being done, he suffers the animal to get up, and assures the owner that he is quite cured: but from the force which has been used in casting and manacling the animal, it sometimes happens that inflammation of the chest makes its appearance, and soon hurries the animal away. He has his excuse for this—the *bechigos*, when inflamed, are incurable, and under that vain pretext he preserves his reputation always intact.

The dog and the cat are not deemed worthy of any medical treatment when they become ill—nature alone would effect a cure here, if a cure is possible. In point of fact, these animals may think themselves well off that the *langueyeur* disdains to meddle with them; for they do get well sometimes, which would rarely or never be the case if the empiric was called upon to treat them.

The keep of the ox, the cow, and the colt, varies little in the middle of France. They have hay during the winter, fresh grass in the stable during the spring, and, during the summer and autumn, they are fed in the meadows. The work of the first is very moderate, and of the second nothing at all. This renders their food wholesome while they are in health, but pernicious in case of illness. When a proprietor on the border perceives that his ox is not well, and which he recognizes by the diminution of appetite, he places before him all kinds of aliment, dry and green, and if he can be induced to take either, he is suffered to eat to satiety. Then the cowleech is sent for to give him some stimulating drink, in order that he may eat the more, and all his food is left before him, until he either devours it, or it is spoiled. The cowleech examines every part of the animal, particularly the horns and ears, but says not a word of the nature of the disease until he has heard the opinion of the proprietor, who hastens to tell him that it is such a malady, and that he must administer such a remedy.

If the disease has little that is dangerous in its nature, the animal gets well in spite of the remedies of the cowleech, who does not fail to boast of his attention, his medicine, and his



skill; but if the poor beast labours under some serious disorder, which, by the help of the ignorance of the cowleech, carries him off, he is not in the least abashed or disquieted, but finds some particular cause of death, which the most talented could not have detected, and, consequently, could not have avoided.

If, towards the close of the affair, a veterinary surgeon is called in, too late to administer any assistance, and the death of the animal is rapidly approaching, the cowleech takes refuge behind the inability of the other to perform miracles, and, to preserve his own reputation, takes care to calumniate the regular practitioner. He often carries his impudence so far as to say, that if he had been left alone the animal would not have died.

If the disease is to any considerable degree acute and intense, the animal never or very rarely survives; this man, therefore, always gives an unfavourable prognosis, knowing well that, if the prognosis should be wrong, he will have greater praise for having saved an animal condemned to die than for curing one that had little the matter with him: but, I repeat it, these cures are exceedingly rare, even supposing that the affection was sufficiently slight to enable nature to triumph over the disease and the remedy; for the empiric takes care to render his prognostic true, by cramming the animal to satiety with every kind of food that it will take. During their convalescence, also, their food is forced upon them beyond all measure; and the feebleness of the digestive organs at this period produces affections which complicate themselves with the disease, not altogether conquered, and inevitably destroy the animal. The proprietor will never complain that the cowleech is over-feeding his patient, and the veterinary surgeon can seldom obtain that restricted diet on which all hope of success depends; for the greatest fear that the proprietor has, is that his beast will die of hunger. I will cite one case out of a thousand, and which happened to me at the commencement of my practice.

Towards the end of 1824, I was requested to attend a mare that was foundered all round. She had been suffered to eat ravenously of grains and wheat. I saw at once that the ordinary means of treatment—bleeding, poultices, &c.—would effect a cure; but she was eager for food, and it was with great difficulty that I could get her placed on a restricted diet; in fact, after a little while, I could not accomplish my object at all—the manger was always full, in despite of all that I could say or do. The consequence was, that the animal was soon on her litter, and could not possibly get up. I was, after much resistance, suffered to have my own way; and by dint of starvation, and proper medicine and appliances, she was got once more on her feet. Do you think that this proof was sufficient to warn him of his error? No! but in a few days, from the folly of the

master with regard to her food, she was as bad as ever. I was persuaded that I should never get her perfectly sound unless I had her entirely under my control ; indeed, I feared that a cure was now a very doubtful matter. She was with some difficulty got to my stables, and no one could interfere with my management of her. In a far less time than I expected she was again at work. This is one case out of a thousand, and yet the proprietor will not take warning. As for our empirics, they have no idea of what is meant by the word diet ; but are persuaded that the animal knows how to prescribe for himself much better than they can prescribe for him, and that, consequently, it is absurd to deprive him of food when he is eager to devour it. If, therefore, in consequence of this imprudence, the disease with which the animal was affected re-appears during his convalescence, the empiric does not recognize it—he gives it some other name—perhaps he treats it a little differently, or he pursues his former course ; for he has a very limited circle of curative means, and usually seizes at hazard the first formula that comes into his head. It is rare indeed for them to employ any other measures than the most powerful excitants and the strongest tonics, differently combined, but always having as their base, or, more properly, their auxiliary, wine, which they consider as an universal panacea. Antiphlogistics, sudorifics, and narcotics, are totally unknown. Purgatives and diuretics they often have recourse to, and occasionally in outrageous doses ; but these medicaments are of far inferior value in their estimation than their tonics and their wine, and many animals are lost through neglect of their use and value.

Such are the empirics of our southern departments, and, in a great measure, of the whole of France—such their method of curing every disease, and the medicines which they employ in every case. Their apprenticeship and their practice are passed in a smith's in a neighbouring village. There, in six months, or a year at most, they have learned a dozen scientific terms, strangely pronounced, and which they apply to as many hundred diseases. Another dozen serve to designate their catalogue of drugs. Unfortunately, every adept has not the same aptitude to learn ; and thus the names of diseases and drugs are curtailed, or lengthened, or disfigured, so that in one canton it is impossible to recognize or understand the meaning of another.

#### DIVINERS, CUNNING MEN, &c.

Another division of the restorers of the health of cattle whose talent, in effrontery at least, is superior to that of the blacksmith, and who assume the name of *devins*—cunning men—also abuse the public credulity. These men have a kind of universal knowledge, for they protect and cure both men and animals. Some of these individuals, having located themselves in



certain parts of the country, speedily acquire a colossal reputation among the neighbouring rustics, which increases in proportion to the distance from their domicile. Numerous dupes come from far and near to consult them, and to purchase the remedies and secrets with which these rogues supply them, for which they pay a little, or not a little, dearly, and which, in fact, is the greatest merit of which they can boast.

Sometimes the patient, if he belongs to the human species, presents himself at the habitation of *le Devin*, who, after having consulted his book, gives him an antidote applicable to his case, and points out to him the manner in which he should use it, especially warning him that it must be taken on every third or ninth day. If the sick person is unable to go to the sorcerer, he sends some one on whom he can place confidence, who, after having given him a history of the complaint, receives a secret remedy, or, perhaps, the promise of some special prayers that will be offered up by the sorcerer, and that will cure him in so many days. If the first consultation is not attended with the desired good effect, or if he lives at a considerable distance, he is told to send again, or to come on the ninth day: if he lives nearer, he must come on the third day. The reason of this new consultation, and of many others, is easily comprehended; namely, that a piece of three francs should be the constant companion of the journey, and should terminate the consultation.

If the patient belongs to the brute species, the wizard, ordinarily, does not see him at all, or only after an account has been given of the malady. He then orders a remedy, or, perhaps, some prayers to be said at a certain hour of the day, promising always that the animal shall be cured on a certain day.

If the conjurer goes to see the patient, he always wants, in order to complete the cure, a well-dressed *omelette*, a large piece of bread, and a good bottle of wine, which he must force him to swallow. After being carefully shut up, he quietly eats the *omelette*, which he has caused to be well basted; and, the repast being ended, he comes out and assures the proprietor, with all the effrontery in the world, that the animal will be quite cured, and he goes away without accepting even a glass of wine for himself.

At another time, according to the whim of his stomach, he wants the blood, or gizzard, or liver of a black fowl, in order to prepare, and he orders the farmer to kill the animal without a moment's delay. He takes what he wants for the composition of his charm, which he prepares in his own way in private, and forces it on the animal; but as the fowl is dead, and no great time beside that which is consumed by the sorcerer is required to dress it, the peasant will not let him go until they have set to work and eaten it.

Sometimes the sorcerer requires remedies which it is impossible



to obtain at a short notice, or at any notice, and without which the animal will assuredly perish. He must have a plant gathered on St. John's day before the rising of the sun—or one plucked on St. Judy's day during the performance of mass—or a third on the day of Pentecost. Then they must be infused in the sacred water on the evening of the Passover; but as it is not possible to procure these simples gathered on the days indicated, he is left without means to perform the cure, and he declines it, notwithstanding every entreaty; consoling himself with the reflection, that it does not depend upon him whether the cure takes place or not, and the owner of the animal has not the slightest doubt of the virtue of the remedy, if it had been possible to procure the materials.

One of them, named Vital, being consulted with regard to an ox that had been ill some time, and, no doubt, was very seriously so, ordered, without seeing the animal, a drink which most certainly could not do him any harm, but as certainly could not cure, although the impostor had positively assured him that it would. It consisted of a decoction of nine grains of juniper in a pint of the blessed water of the feast of Pentecost, to be taken on three consecutive days, at the expiration of which time the beast would be radically cured.

I met the owner of the ox as he returned. He stopped me to tell me of the promised cure of his beast, in which he placed so much faith, that it would have been impossible to persuade him that he had been duped. It is true, that the juggler had promised him that, every morning at the appointed hour for administering the drink, he would offer up a certain prayer that would very much increase its efficacy. The animal died in the due course of the disease.

The same impostor, in a case of laborious parturition in a cow, took up his residence at the house of the owner during two days. He advised the owner to give, as infallible, the decoction of a plant which he brought with him, and which proved to be nothing but pimpernel; and when, afterwards, the cow laboured under complete prostration of strength, he ordered a bleeding from the coccygeal arteries.

Many other accounts are given of the strange superstitions and trickeries that prevail, but we retain them for some other idle moment.

THE Committee appointed by the United Veterinary Surgeons' Club with sorrow announce, that, as the number of adherents to the proposed Veterinary Benevolent Society amounts to only sixty-one, its formation, for the present, will not be entered upon.

[It is with much regret that we insert this notice. We trust that we shall have better news to communicate, when, a little while hence, our other affairs are arranged. This is a noble cause, and must not be abandoned.]

# THE VETERINARIAN.

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VOL. XIV, No. 166.]      OCTOBER 1841.      [New Series, No. 106.

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## RESPIRATION,

THE MECHANISM AND CHARACTERS OF, IN DISEASES OF THE CHEST.

*By Mr. R. PRITCHARD, V.S., Wolverhampton.*

[Continued from page 379.]

IT remains for me to describe the characters of respiration in diseases of the chest, &c.; but previous to proceeding with these phenomena, I must give a brief definition of the terms used descriptive of the movements of the thorax, which present a very great variety of character, and without some explanation of them I may be but imperfectly understood. Respiration is constituted of a relative number of inspirations and expirations within a given period; which, as I before stated, averaged in ordinary breathing from four to eight times in a minute. When the respiration exceeds that number, it is *frequent*; it is termed *quick* when the respiratory movement of inspiration is abrupt, short, and rapid: if quick breathing is coupled with frequent respiration, it is then said to be *accelerated*, and this form of respiration may exceed the pulsation of the arteries in number, and is termed *panting*.

The movements of respiration are, in some instances, of less number than the ordinary standard; it is then termed *rare*. Respiration is called *slow* when the respiratory movements are long and gradual. When the expansion of the chest is very limited, it is termed *small* or *short*; *large* when the expansion of the chest is full, whether in quick or slow respiration. If the inspiration and expiration follow each other in due succession, then it is called *regular*; when the intervals vary, it is said to be *irregular*. The respiration is *equal* when the inspirations and expirations are similar, whether it be large or small, quick or slow; and when either of the movements exceeds the other in force, time, or extent, it is termed *unequal*. Besides this enumeration, respiration may be *difficult* or *easy*, *complete* or *incomplete*, and to these may

be added *convulsive* breathing: and the respiratory movements may be either *thoracic* or *abdominal*. Respiration is difficult when the large accessory muscles are called into action; it is easy when their aid is not required. When the lungs on both sides of the chest act equally, or concur in extent and function, the respiration is complete; but when one side or division of the lungs or portion of the lung is partially suspended, the movement is then termed incomplete. When the muscles of respiration contract suddenly and with violence, the breathing is convulsive. Respiration is termed thoracic when the diaphragm takes no part in the expansion of the chest, it being effected entirely by the ribs and their particular muscles. When the ribs are passive and apparently fixed during inspiration, the diaphragm alone accomplishing this purpose, respiration is said to be abdominal. Such are the external characters of respiration as observed in the motions of the chest: but there are other and important phenomena furnished by respiration internally of the thorax, in the sounds recognised by the ear on its application to the trachea, bronchi, or walls of the chest, during the circulation of the atmospheric air in the lungs.

The ingress and egress of air to and from the chest produce a sound in the larynx, trachea, and bronchial ramifications, throughout the whole volume of the lungs, to which the very explicit term *respiratory murmur* has been given and very generally accepted. It presents much variety in health, differing in power or intensity; heard at all points of the thorax, but being much fainter in some parts than in others; depending on the vicinity of the large bronchial divisions, and the substance of the parietes of the chest at the point examined, and the frequency of the respiration. In the trachea and first division of the bronchi the sound is similar to the faint blast of a pair of forge bellows. Within the lungs it is reduced to a distant murmur, presenting in different animals, from various circumstances, manifold grades of intensity. It is the changes in these natural sounds, the result of some lesion of the respiratory organs, which produce the pathological phenomena of auscultation; and these must be added to the movements of the thorax, or the characters of respiration would otherwise be imperfectly constituted. The different sounds are designated by terms which are briefly explained. When the murmur of respiration is increased beyond the ordinary force of health, it is said to be puerile in the human subject; but this term is not applicable to quadrupeds, nor does it convey the kind of respiration intended to be represented. Puerile respiration comprehends the natural phenomena of infants, while this noisy murmur in adults is an exaltation of the respiratory sound, the result of di-



minished circulation of air in one part of the lungs, and a consequent increase in the other. The natural and healthy murmur may be exceedingly weak or entirely absent in one part of the lung, while it is augmented in another. This *exalted* respiratory murmur, in all its modifications and grades of intensity, may be either free and clear, or attended by additional sounds termed *râles* or *rattles*. The most frequent of these latter phenomena in horses are the mucous and the sonorous râles; next, the crepitating sound. There is another râle, described by authors, termed the sibilant or hissing, but this sound I do not recollect to have observed. Probably the other sounds in the chests of horses are too loud for the development of this râle. The three first-named râles are useful to the veterinary surgeon, and assist very materially his diagnosis. They are readily described:—first, the mucous râle is a bubbling of frothy fluid, so common and fresh in the memory of all who have ever stood near to a horse with sputa in the trachea and large bronchial tubes, as to require no illustration. The sonorous râle is invariably present in some affections of the lungs, and is readily observed when the chest is auscultated: it resembles the snoring of human sleep, a cavernous murmur; in some cases it likens the cooing of the wood-pigeon, and in others the whining of a small dog, or a kind of wheezing. The crepitating rattle is best compared to the sound produced by rubbing a lock of hair between the thumb and finger close to the ear. Some authors have given elaborate illustrations of the various sounds heard within the chest during the existence of disease, a theorising in which they bewilder themselves, and puzzle those who attempt their practical discovery. The diseases of the chest affecting the movements of respiration are, bronchitis, pneumonia, pleurisy, thoracic effusion, emphysema of the lungs, tuberculated lungs, and some affections of the heart.

In the early stage of bronchitis the respiration is frequent, accompanied by exalted murmur: as the disease advances the breathing becomes quick, then accelerated. It may exceed the pulse in rapidity, and the mucous râle sets in. These changes are soon succeeded by irregular respiration, the inspiration longest of duration. Occasionally the movement of the chest is incomplete, and then the breathing is difficult, and the râle sonorous and powerful. The resonance of the trachea and large bronchi is generally dry during the first and second days of the case in the true or sthenic form of the disease. In the asthenic, the respiration at the onset is sometimes rare or slower than ordinary, and deeper, and, but for this large movement, would be pronounced undisturbed, and although in this kind of bronchitis, as in the sthenic, the murmur is sonorous, it early becomes

wheezing, and the mucous râle quickly succeeds. In some very acute cases, in which the inflammatory action invades the respiratory mucous surface extensively, the secretion, by its abundance, renders the respiration short, quick, difficult, and convulsive; the mucous râle at the same time yielding to or being overpowered by a roaring suffocative noise in the trachea and large bronchi.

*Pneumonia*.—There are two distinct kinds of pneumonia; the one an accumulation or congestion of blood in the vessels of the lung; the other a pure inflammatory action, proceeding in the inter-structural tissue, the vesicular, or in both. In the congestive form, the respiration at first may be frequent, only a few movements quicker than ordinary breathing, and gradually increase in frequency to quickness, and then to an acceleration of alarming rapidity; or, in a manner, suddenly, the respiratory movement may be accelerated, and out-number the pulse; but in either case it is difficult, short, equal, complete or incomplete, commonly the latter. The murmur is exalted in the large bronchial divisions, but it diminishes as we auscultate backward to the margin of the lobes. In pneumonitis, or true inflammation of the substance of the lungs, the respiration in the first stage of the disorder is frequent, gradually becoming quick as the second stage sets in: it is from the first unequal, the inspiration being prolonged as compared with the expiration, which is short and quick. Thus it will be observed that the movements of the respiratory organs differ much, in inflammatory pneumony, from the congestive form, which is, in point of fact, not inflammation of the lungs, but obstruction of blood, and inability of the vessels to carry on the pulmonary circulation: this stagnation of blood, if unrelieved, produces death much quicker than real inflammation of the organs. Auscultation, early in pneumonitis, gives an exalted murmur in all those parts of the lung remaining in health, and in the parts inflamed it is feeble and weak. As disease advances in the lung, the crepitous râle is developed, and, should hepatization and consolidation take place, a loud sonorous bronchial râle overpowers every other sound, arising from the passage of air in and out of the diseased lung. At this stage of the disorder the breathing is difficult, limited, and accompanied by a singular catching of the chest and flanks early in expiration.

*Edema* of the lung, pneumonitis, occasionally terminates in an effusion of serous fluid into the cellular tissue of the organ, seriously affecting the respiration: it is frequent, large, laborious and difficult, occasionally very quick and suffocative. The sounds of the chest are masked at all points, both lungs being commonly affected; and the murmur gives place to a crepitating râle.

*Pulmonary Emphysema* produces frequent, large, irregular, difficult, and laborious respiration : the whole of the respiratory agents are called into active exertion, in order to accomplish the expulsion of air from the lung, inspiration being readily affected as compared with the expiration. Auscultation gives a weak respiratory murmur, and the wheezing crepitating râle, sometimes humid, at other times dry. Expiration is generally attended by the râle sonoré, like unto the cooing of a dove, or the whining of a small dog : this is the place to describe the characters of respiration when the lungs are *tuberculated*. In cases where the lungs are extensively affected by this disease, the breathing is accelerated, slightly irregular, with a little catching of the respiratory muscles early in expiration, a proportionate rise and fall of the costæ, and inspiration and expiration equally short and limited. Auscultation presents a humid gurgling sonorous râle in the trachea. The chest gives a bronchial sonorous rushing râle, by which the respiratory murmur is obscured at all points.

*Pleuritis*.—Early in the disease, when both sides are affected, the respiration is painful and limited ; inspiration quick, irregular, and interrupted, and expiration slow and prolonged. As the disease advances, the respiration is accelerated, inspiration full, expiration difficult and painful. If one side only is pleuritic, the movements on this side are much enfeebled, or altogether wanting, while on the sound side they are readily observed. Auscultation early in the disease gives slightly exalted respiratory murmur, certainly not fainter, and rarely a little rubbing sound is heard at some point, commonly at the superior part of the chest. As the disease advances, and the pleuritic membrane becomes thickened, the respiratory murmur grows more feeble and less distinct. When *effusion* takes place, the respiration is accomplished with more difficulty, the inspiration larger, the expiration more prolonged ; the inspiratory murmur grows indistinct at the inferior part of the chest, and louder upward. As the fluid increases in the chest, the respiration becomes more difficult, laborious, and extensive ; the costæ elevated to their utmost in inspiration, and the abdominal muscles contracting in a laborious and jerking manner to their greatest degree in expiration—both movements, taking up a longer period, reduce the number of respirations considerably. The respiratory murmur now grows very loud at the superior part of the thorax, provided the pulmonary substance continues entire ; but the great pressure of the fluid will probably inflame the lining membrane of the bronchial tubes, and sanguineous effusion take place into the inter-lobular tissue of the lungs, and produce a sonorous humid râle, so powerful as to obscure every other sound. The gurgling of fluid is not often



very distinct ; it depends upon gaseous product, and this early in the accumulation of fluid. This sound is more a visionary than a real one, which must be obvious when we reflect that an unoccupied space or void cannot exist within the thorax of a living animal ; therefore the alternate rising and falling or descending of the fluid effused, experiences no sudden transposition by which a gurgling sound would be produced. In some cases of plastic formations and additional chambers filled with effused fluid, and subsequent to paracentesis, this phenomenon is observable.

*Diseases of the Heart* change the characters of the respiration in a much less degree than in affections of the lungs and pleura, and much less diagnostic of their nature and extent. The most remarkable phenomenon observable in the respiratory movement in the several phlegmasia of the heart is, sighing : whether in endo-carditis, carditis, or pericarditis, the sense of oppression and anxiety in the precordia, which invariably attends these cases, always produces deep and frequent sighing, which seems to afford temporary relief. The respiration in each of the above lesions, free of complication, is always equal, whether it be frequent or accelerated ; and however rapid the movements of the chest may be (which depends on the degree of pain the animal suffers), it is never laborious, and, as before stated, it is always equal, except when interrupted by sighing. Auscultation gives exalted murmur at every point of the thorax. All painful diseases of the abdominal viscera accelerate the respiration, and the most rapid movement I recollect to have witnessed was in a case of enlargement and extensive ulceration of the spleen. In all the abdominal diseases the respiration is always equal and complete, and the murmur universally exalted.

Here terminates my essay on the movements of respiration ; and, in conclusion, I beg to observe, that my original purport was, briefly to illustrate the various movements of respiration, more especially in order to consider the pathology of the characters, rather than the natural philosophy of its mechanism. I preferred to consider the respiration abstractedly, from the circumstance that authors of works and transcribers of cases are, for the most part, so very deficient in their illustrations of this very important movement in the diagnosis of some of the most formidable and destructive diseases in our patients. Intelligence arising from a study of the pulse seems to have quite the leading attraction, while the respiratory characters are barely glanced at ; yet the former is oftentimes deceptive, and the latter very rarely is.

Much of the reading in this essay may appear prolix and dry ; but it must be clinically read to be properly appreciated. In the loose box with the patient, I fear the descriptions of respira-

tion will prove too concise and limited to interpret the whole of the symptoms connected with breathing; I, therefore, need not apologise for their length. On subsequent perusal I observe their deficiency, but a *periodical* must be their excuse.

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## INFLAMMATION OF THE LINING MEMBRANE OF THE LEFT VENTRICLE OF THE HEART IN A COW.

*By Mr. JOSEPH CARLISLE, V.S., Wigton, Cumberland.*

ON the 19th of February I was requested to attend a cow, the property of Joseph Hodge, Esq., of High Moorhouse, near this town, that was supposed by the cowkeeper to have the epidemic. So alarming was her appearance, that he felt confident she would presently die if no relief was afforded.

On arriving, I found the cow standing in the straw-yard, apparently suffering intense pain. I questioned the keeper respecting the case, and the length of time from the first appearance of the disease. He informed me that during the night she had eaten all her allowance of hay, and voided her excrement with no observable alteration in quantity or consistence; and that it was not until he entered the cow-house for the purpose of milking, at eight o'clock, and about an hour after the cow had been fed with some hay, that she was observed to be amiss.

*Symptoms.*—The animal was standing in the straw-yard foaming from the mouth, and with a copious discharge of mucus of a ropy consistency proceeding from the nostrils. The respiration was laborious, and accompanied by a loud and singular noise in the lungs—a kind of indistinct whistling. The action of the heart resembled the clapper of a water-wheel, and completely rendered my endeavours inadequate to judge of its motion. The pulsation at the jaw was ungovernable, and congested almost to a rapid but violent tremor. There was a singular motion of the ears, sometimes pointed forward with great quickness, and at intervals lying quite flat and relaxed. The abdomen was tense and inflated to a considerable degree. The eyes presented a peculiar aspect—the depressor muscles appearing very much contracted, and drawing the eye quite into the inferior portion of the orbit, leaving a considerable space between the eyeball and upper ridge of the orbit. She was unconscious of surrounding objects. The mucous membrane was pale, but the bloodvessels on their surface considerably injected. There was a singular spasmodic action of the masseter and buccinator muscles, accom-

panied by a copious discharge from the inner canthus. No inclination to move her body: but continually stamping with her feet, pointing her nose forward, and curiously elevating her head.

There was something singular in the train of symptoms, and I must confess I was quite at a nonplus to judge of the nature and situation of the disease. The symptoms seemed to favour the supposition that it was a case of cerebral disease; but the more I thought of it, I suspected that the brain was only secondarily affected, and that the primary malady was connected with the heart. The owner maintained that, whatever was the real seat of the malady, it was one of an acute inflammatory character, and called for prompt and decisive measures. I perfectly agreed with him, and immediately proceeded to bleed her; but before three quarts were abstracted, she fell and died without a struggle. During the time the blood was flowing not the least alteration took place in the heart's action; but about two minutes before death the breathing was become more tranquil. The blood was very thick, and it was with the greatest difficulty I could get it to flow, having to press it out in the direction of the vessel. I felt satisfied, towards the sequel, from the stagnated and congested state of the circulatory system, that the heart was much involved, and that my prognosis as regards that organ was likely to be correct.

About two hours after the death of our patient, I attended for the purpose of making a post-mortem examination, in order to ascertain, if possible, the cause of so sudden and unsatisfactory a winding up of the affair. I proceeded first to examine the abdominal cavity, using the greatest minuteness—the only method to ensure correctness in our prognosis on future occasions—and found the chylopoetic viscera in a perfectly healthy state. I next examined the thoracic cavity: the lungs were much inflated and congested with venous blood, but free from any inflammatory or abnormal appearance. The heart was removed and laid aside until the examination of the head, which exhibited the following appearances:—the dura and pia mater were much more vascular than common, as well as the cortical portion of the brain—the net-work of bloodvessels on the inferior part of the medulla oblongata was much injected—constipation of the vascular system of the brain was evident throughout, but no inflammation or extravasation in its substance or meninges.

The heart, enveloped in its pericardiac bag, exhibited no abnormal appearance; but there was a little more fluid than usual in the pericardiac sac, and the bloodvessels were somewhat injected, yet by no means pointing out the least disease.

Having carefully examined the external parts of the heart, and



not finding the least appearance of inflammation, I proceeded to lay open the heart. On exposing the internal parts of the left ventricle my attention was immediately drawn to the appearance of that fine and delicate investment or lining tunic. It assumed a beautiful variegated dark and light red, pointing out the seat of intense inflammation. Here and there were patches of a leaden hue, particularly on the auricle. Those prominent fleshy pillars termed the *carneæ columnæ* were far advanced in putrefaction, extending even into the substance of the heart. For some distance several of the *chordæ tendineæ* were torn asunder. Some patches of inflammation were about the mouth of the aorta, and the semilunar valves had assumed a cartilaginous structure. The right ventricle was a little discoloured, but not amounting to disease. It was my intention to have sent you the heart, thinking it might be worth the attention of the Veterinary Medical Association; but having to leave home for some time, I gave it to Mr. Rook, for a drawing, which you would probably receive some time ago. Should you think it worth notice, you may lay it before the members of the Association, as I am desirous of knowing if similar cases have occurred to any of them, and what is their opinion as to the cause, &c. In my opinion, a thorough investigation into cardiac diseases is much called for in veterinary pathology.

P.S. Since writing the above I have attended a mare for carditis: the particulars of the case I will send, should you consider such sufficiently interesting.

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[We shall be thankful for the communication to which Mr. Carlisle refers.]

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## CASES OF CARDITIS.

*By Mr. J. J. HUGHES, V.S., Foley, Staffordshire Potteries.*

I WAS much pleased in reading a "Case of Carditis" in one of your Journals, sent by Mr. Wheatley; and as I have met with a few interesting cases similar to his, I shall make some extracts from two or three of them, which are very much at your service. I recollect when at College, the heart's action, in pericarditis, was described as being very loud, capable of being heard at a distance of 10 or 15 yards. Notwithstanding this high authority, I do submit that in 19 out of 20 cases of simple pericarditis the action of the heart will not be heard without mediate or immediate auscultation. In endocarditis or carditis, I allow there will be this violent action; but in pericardiac inflammation

there is very soon, if not checked, fluid effused, and the sound of the heart diminishes in the same ratio as the fluid increases. So I find it, and so it was in Mr. Wheatley's case. On the 3d day from the attack this gentleman tells us that the heart could not be heard, although it was before beating "loud and quick and audible at some distance." On the 4th day, "pulsation could scarcely be felt by applying the ear." This was carditis, or perhaps endocarditis, originally; but the two quickly became complicated, as was shewn in the autopsic examination. To these succeeded pericarditis. On the 3d day there was effusion, and as this increased, the intensity of the sounds of the heart's systole and diastole decreased.

CASE.—A cow of Mr. Glover's, an extensive brewer near this place, being ill, I was sent for. She was "off her feed;" her secretion of milk was nearly stopped, and her breathing was rather hurried and laborious. On placing my hand on the left side, I could not detect the least sign of any action of the heart. I applied my ear, but even this failed me. On compressing the submaxillary artery, I noticed that its action was particularly strong, more so than any I had known before. The pulse was about 75, with, now and then, an intermission. This strong pulsation at the jaw, and the absence of every sign of the heart's action at the side, led me to give my opinion that the termination would be fatal, under whatever treatment the animal might be placed. Mr. G., however, wished me to proceed, and I did so. I gave febrifuge medicines combined with diuretics and sedatives (but not digitalis, for I fancy I have seen it tend to produce hydrops pericardii). I bled her, and also blistered the sides of her chest. I continued treating her for a fortnight; but, being convinced that there was no reasonable chance of her recovery, the owner, at length, consented to have her destroyed.

*Post-mortem appearances.*—There was a large quantity of water underneath the serous coat of the intestines, and a considerable diminution of the mesenteric glands. On opening the thorax about three buckets of a brownish serum escaped, suspended in which was a large quantity of fat-like lymph. The lungs were healthy, though the pleura pulmonalis was in places thickened a little. The pericardium was one-third of an inch in thickness, and contained two quarts of serum. The heart presented an appearance beautifully exemplifying the extent to which vital organs may be diseased without immediately destroying life. On the left auricle was a fatty tumour, weighing between five and six ounces: there were also smaller tumours interspersed over the greater part of the heart. This cow lay down the greater part of her time.

*Extract from Note-book.*—"In thickening of the pericardium we have a *râle*, resembling the cutting of India rubber with a dry knife. This was particularly so in a foal belonging to Mr. Shaw, of Knew-Hall, in this county, which had endocarditis as well as pericarditis. This sound leaves when there is much effusion. The foal lay down until within a few hours of its death, although hydrothorax supervened. The pericardiac sac was considerably thickened."

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## DISEASED TRICUSPID VALVES IN THE LEFT VENTRICLES OF THE HEARTS OF PIGS.

*By Mr. W. A. CARTWRIGHT, Whitchurch.*

IN the last July number of *THE VETERINARIAN* I reported a case of diseased valves of the heart of a pig. Since that time I have met with the two following cases of exactly similar nature. This leads me to believe that it is not a rare occurrence in animals of this species that die suddenly; and it surprises me very much that the action of the heart is carried on with such extensive obstruction and disease.

**CASE I.**—On the morning of the 20th July, 1841, John Hickson, of this town, found one of his pigs, about four months old, dead. He had purchased it three weeks before, and it was in excellent condition, and gaining fat rapidly, and, on the night previous, he ate his supper as well as usual.

*Post-mortem Examination—the Heart.*—The auricle on the left side was sound. Growing from the edge of the auriculo-ventricular valves of the same side were several uneven warty excrescences, two of which were as large as marbles. The largest was attached to a portion of membrane that hangs from the side of the aorta, and lies between two valves, and which cannot, in strictness, be called a portion of valve, though some of the *cordæ tendineæ* are attached to its sides. In this case, however, I fancy the tumour attached to it made it more pendulous than the part otherwise naturally would be. Adjoining the large tumour, and situated on the upper part of the septum ventriculorum, there were several small papillary growths of a similar nature. The ventricular opening was three parts closed with these morbid growths.

**CASE II.**—On the morning of the 4th August, 1841, a pig, about a year old, the property of Mr. Butler, in this town, was taken unwell, and would not feed, but there were no particular prominent symptoms to indicate the complaint. In a few hours



afterwards he was drenched with sulphur. Soon after this his respiration increased, and he was greatly distressed, and, about three o'clock in the afternoon, he died. It appears that, some months previously, he was thought to have the epizootic, and walked on his knees, although nothing was visible between the claws to indicate the disease. Of this, however, he had got well; yet the owner always thought there was something amiss with him.

*Examination.*—He was three parts fat, and his flesh of an excellent colour. The *liver* was rather of a darker colour, and softer than usual, and, I would say, not really healthy. The lining membrane of the *stomach* was of a reddish colour, and probably inflamed from the action of the sulphur. The *heart*, I found, was the cause of his sudden death; in external appearance it was healthy, and no one, on looking at it, would have imagined there was such a disease within. The left auricle was sound, and not enlarged; yet, on looking through it to the left ventricle, the ventricular opening was found to be in a great measure closed by a loose, jagged, warty, fleshy excrescence, growing from the whole surface and circumference of the tricuspid valves, and filling up the intervening area, and which projected in its centre at least half an inch into the auricle, giving the whole almost the appearance of the os tinæ. There was, in a few places on the inner lining of this ventricle, and near to the valves, a similar commencement of disease, and probably from contact. The remainder of the ventricle was sound. The auricle on the right side I thought to be a little larger than usual.—In this case there could not be a greater space in the auriculo-ventricular opening than would admit of the introduction of a goose-quill, nor even this, unless from the dilatation of the parts; for, on looking at it, it appeared in a manner closed, except a very small opening near the aorta.

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## GASTERO-ENTERITIS IN PIGS.

*By the same.*

CASE I.—ON the 27th of June last, Mr. Hort, of this town, observed one of his small pigs, about three months old, to be unwell and refusing food. It forced its head against any thing it came in contact with, and sometimes it would walk round and round for many times. It stood up most of the day, and was much swollen. Open the bowels with castor oil.

28th.—No better. It now lay down on its breast and fore legs, and continued in this posture the greater part of the day.

Its respiration was increased. Repeat the aperient, and administer enemata. In the course of the afternoon it died.

*Examination.*—On the villous portion of the stomach, within its greater curvature, was a patch, at least three inches in circumference, of intense inflammation, and as red as scarlet. The stomach was half filled with soft food, and of a yellowish colour. There was very great inflammation of the mucous membrane of the intestines. The inflammation did not occupy one continuous space, but there were patches of from four inches to a foot in places that were otherwise tolerably healthy. The inflammation was also in irregular circular streaks round the intestine of one-eighth of an inch in width. There was a small similar patch of intense inflammation on the mucous coat, at the blind end of the cæcum, as well as in the stomach.

The rectum had been ruptured by the owner, by too forcibly clystering. There was, perhaps, half an ounce of serum within the pericardium. The brain and all other parts were sound. A portion of fæcal matter had oozed out through the ruptured part of the rectum, and there were nearly two quarts of effusion in the cavity of the abdomen.

*Observations.*—It appears that three large lettuces had been eaten by this pig the day before, when he appeared quite well. Did they cause the disease in his head (if any) and in the bowels? What produced the excessive inflammation in his stomach? He had had no other medicine than the ol. ricin. to produce any fatal purgative action, and his bowels were quite relaxed.

CASE II.—In the month of May last, I was called in to look at a pig of Mr. Kempster's, that had been ill a couple of days. It was lying down in a high state of fever, and breathing laboriously; and would not, I think, have lived long. It had been in a similar state most of the day, and had a large quantity of pulv. jalapæ given to it. I ordered it to be killed.

*Examination.*—I could discover nothing amiss, except a patch of inflammation, as in the last case, in the stomach, and some in the intestines.

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## CASES OF ENTERITIS.

*By the same.*

ON Dec. 20th, 1835, I was sent for to see two pigs that were ill, belonging to Mr. Parker, of the wharf, in this town.

*Symptoms.*—In one there was great stupor, and indifference to move about. He was very weak, and would fall on his knees

or on his side: in short, we could do what we would with him. The other was turning round half his time, or forcing his head against any thing he came in contact with. Sometimes he would fall on his knees, but soon get up again; at other times he would convulsively shake his head upwards, or on one side, and until he almost fell down. The head and ears were hot; the pulse very quick; the respiration natural. The abdomen of one was very slightly distended, and the sides of the other were flat. I advised that both of them should be killed, as they were about seven score weight each, and fat.

*Examination.*—The stomach of the first was filled with half-digested meat, composed of ground oats, barley, and potatoes; but there was no distention or disease in it. The small intestines looked inflamed, and on laying open the abdomen, and cutting into them, they were found to be so. On the mucous membrane of the large intestines there were many small eminences or tubercles, similar to those that are found in the stomachs of horses and produced by bots, with a small cavity in their centre. The lungs were congested in their anterior small lobes, but otherwise sound.

The small intestines of the other were also inflamed, but not so much as in the first pig, and there was also a great deal of secretion in them. All other parts of the body were sound, but I had not an opportunity of examining the head.

*Observations.*—These pigs ate their suppers over night as well as usual, as may be known by their stomachs being filled. On the Thursday preceding they had had thrown into the tub of meat from which they were fed, a quantity of refuse brine, made of salt and saltpetre, that had been used for curing some bacon; and on the next day the servant said the pigs had not eaten their meat *so well as usual*. This, however, was thought little of, and was all that was seen amiss with them. Now, whether this was the cause of the apparent head affection I know not; or, whether the disease, which the brine most probably had caused in the bowels, affected the head sympathetically.

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[We most cordially thank Mr. Cartwright for the manner in which he follows up these sadly neglected but important subjects. It does him much credit. His request shall not be forgotten. As to the charge which he brings against us,—we, at once, plead “Not guilty!” but we acknowledge that we rejoice in the result.—Y.]

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## QUICK CIRCULATION.

*By Mr. J. TOMBS, Pershore.*

*May 1840.*—A BLACK cart mare, in high condition, foaled with extreme difficulty. In two days after, not going on satisfactorily, the owner sent for me. I found her affected with inflammation of the uterus and laminitis. The pulse exceeded 100, and remained so for eight days. She lay down incessantly, and could not get up without assistance. When up she could not walk, and the pain was greatly increased while standing, denoted by her pitiable countenance, and breathing excessively laborious. She fed sparingly, and drank largely. The feet were not very hot; she looked back towards her flanks, and rolled about occasionally. She was purged freely, and had opiates and injections administered. She was bled repeatedly from the jugular and the circumflex artery of the feet, all being inflamed. The region of the uterus and the feet were bathed perpetually for five days after parturition, when an abundant discharge of pus took place, which gave considerable relief.

On the eighth day after the attack she began to improve very much. In a fortnight I had her shod with a leather sole under the shoes. The jarring of the feet gave great pain, and crippled her for a day or two; however she soon got upright, and suckled her colt, which was fed with cow's milk during her illness.

I do not register this case as having any peculiar novelty about it, but merely to eradicate an erroneous impression from some people's minds, that animals never exist after the pulse has exceeded 100 beats in a minute for a few days.

Another patient, where the pulse was 95 for five successive days, was a roan cart mare, that had pneumonia last autumn. Her respiration was extremely quick and laborious, and her expirations were unusually deep. She was ill twenty-four hours before I visited her, and then she had been bled and had a diuretic given her.

I bled again, until I altered the character of the pulse, when she perspired profusely, and gaped. I then had her extremities rubbed and bandaged. Her diet was mash. At the onset I gave laxatives and febrifuges; afterwards vegetable tonics combined with mild diuretics. I was obliged to bleed moderately twice after the first large quantity of blood that I had abstracted. I blistered the sides extensively, and inserted six setons in the breast and behind the fore legs before I could knock down the inflammation. In a week, however, she began to cough strongly, and discharge at the nostrils. When she was first attacked she could scarcely cough, being so inwardly sore. In a fortnight I struck her off the sick list.

## A CASE OF POISONING BY HEMLOCK.

By Mr. JOHN HOLFORD, V.S., Northwich.

EARLY in the morning of the 10th of May, in the present year, I was requested with all possible speed to attend a stock of dairy cows, consisting of twenty-five in number, the property of Mr. Bennet, of Losbock, who entered on the farm during the last spring. From the symptoms stated below, I suspected that the herbage must be the cause of the mischief. My first object was, therefore, to gain the history of the case, which was as follows.

On the previous day the owner had turned the cattle into a meadow, for the first time since he entered on the farm, for the purpose of eating down the herbage, prior to turning in a quantity of sheep, which he intended to summer on the same land. On further inquiry from its late occupier, I found that this piece had been mown for a great number of successive years; and the reason he assigned was, that if any of the stock happened to get into this meadow, the milk of these animals was always sour on the following morning.

A medical friend has since visited the place with me, and found it to be a marshy piece of ground, surrounded by a brook, which must, after any quantity of rain, have overflowed it. The herbage consisted of coarse grass of all kinds, and the common hemlock (*conium maculatum*) being particularly prevalent, which at once I thought a sufficient cause to account for the sufferings under which my patients were labouring.

*Symptoms.*—On entering the cow-house of those that appeared to be worst, I found three seemingly lifeless; but, on a close examination, I with difficulty found the pulse, which was of an extremely feeble character, beating but little more than half so rapidly as when in health. The extremities were deathly cold, but respiration not much altered. The eyes were closed, and on elevating the lids the pupils were much dilated, and the retina not susceptible to light. The brain was powerfully affected, and, in fact, all the animals exhibited the coma somnolentium. The neck and head were extended, and, on lifting them up, they fell again to the ground like a piece of inanimate matter. The bowels were inactive, and the whole surface of the skin cold, with the hair standing erect.

These were the symptoms of the three worst; but, during the day, twenty-one more of the stock exhibited similar appearances but in a milder form. They were enabled to elevate their heads, but the muzzle was placed close to the side, instead of the pro-

truded and extended position before stated. At one time of the day I was doubtful of the recovery of fifteen of them, the greater part of which, I have every reason to believe, were saved by the use of the carbonate of ammonia, and other stimulants, preceded by the most active purgatives.

Being compelled to go from home, I ordered my assistant to attend to them, and administer the medicine every four hours, which he did, adding the spirit of nitrous ether to the other medicines.

On my return, at six P.M., I found that one of the three most affected had just expired, and that the other two appeared to be hastening to the same fate. The owner had bled the one that died before my seeing them, and by which act I consider that her death was accelerated.

It is impossible to describe the despair of the owner, and it was with great difficulty that I could induce him to make any effort for their recovery.

I ordered my assistant to remain with them during the night, and administer the stimulants every hour—to clothe them well, and not permit them to sleep if possible.

This treatment was continued for eight or ten hours, the animals evidently rallying after each dose; but if it was discontinued for any length of time, they sunk again into a state of lethargy. At one period of the night the owner thought that three of them were dead; and, had it not been that the assistant was on the spot, they would have been left to take their chance. The medicine was now administered four times every hour, for two hours; and this system of treatment being persevered in, perspiration at length broke out on the skin, the extremities became more than naturally warm, the countenance lively, and every symptom of approaching convalescence was evident. Shortly afterwards the bowels responded to the purgative medicine, which, in a few hours, set all to rights, except the great debility that was left. In a week or two the animals regained their original strength.

It was observed that the cows which had lately suffered from the prevailing epidemic were in the most dangerous state.

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You probably expect my opinion respecting the circulation of our monthly journal, *THE VETERINARIAN*. Can there be a doubt that the free and universal circulation of science must be of more permanent advantage to the student, and more conducive to the honour of the profession, than the confinement of it to a mere corner, as-if ashamed to be seen and known?

It may occasionally happen that a case is treated without the aid of the veterinary surgeon, and the hint of the treatment has



been gleaned from the pages of this journal ; but in the great majority of instances, those who are capable of reading such a work as *THE VETERINARIAN*, are the first to call in the educated man. So convinced am I of this fact, that nothing is more gratifying to me than to hear a gentleman mention any scientific work, and very often I offer volumes from my own shelves for their perusal. These are the men that value the scientific practitioner, and it is by those only that a work like *THE VETERINARIAN* can be understood : it, however, might be well to be more guarded in the description of treatment, and merely give the class of medicines used, except in extraordinary cases, or on trial of any new medicine, when the quantity prescribed might be specified.

I fear that the union of "the Association" with the *VETERINARIAN* was of no advantage to the old work. I know of several who complain, and justly so, that in 1837 the price of the work was but eighteen pence, and it contained a great deal more useful and practical knowledge than it does at present. Let the works be separate. There will be no occasion for ill-will, and veterinary knowledge will progress.

## ON THE ADMINISTRATION OF ANTIMONIALS TO CATTLE.

*To the Editor of "The Veterinarian."*

CONCEIVING that the well-intended observations of a medical gentleman on the use of the pulvis antimonialis (now named *p. antimonii compositus*, in the London Pharmacopœia) with your strictures on the administration of antimonials to cattle, in a late number of your Journal, are calculated to prejudice the inexperienced against their employment, I beg to state, that, having used them during a practice of nearly twenty years, I still exhibit them with the greatest confidence in inflammatory diseases of the respiratory organs, whether confined to the mucous or serous membranes, or cellular tissue ; in cerebral affections, as phrenitis and encephalitis parturiens ; in nephritis, and in almost all cases of sthenic fever and inflammation—topical or general, also in cattle, provided the chylopoietic viscera are in a normal condition. Even to this proviso there is an exception, where, *à priori*, we should least expect it, that is, in dysentery, in which the antim. pot. tart. seems to be more efficacious than hydr. chlor., or acid. hydrocyanic.

Were I to select a disease in cattle over which its therapeutic

action would quickly be perceived, I should say, give it in that commonly called *blain*, the proximate cause of which appears to be a suppression of the cutaneous exhalation, and is indicated by a sudden swelling of the eyelids, labia pudendi, &c., a copious flow of saliva and tears, with obstructed respiration from laryngeal and nasal suffusion; the integuments adhering tightly to the body, and the skin on the neck feeling like a board. These symptoms are often soon removed by the preparations of antimony. This disease should not be confounded with glosso-anthrax, from which it differs widely.

The action of p. antim. comp. is more certain and energetic on the cow than on the horse. Perhaps acidity may abound more in the stomachs of the former than of the latter.

Many years ago, I was desired to prescribe for a sow, very ill, soon after delivery, of what seemed to be encephalitis parturiens, and being paralytic, the skin very red, the breathing hurried, and the lactific secretion suspended. She soon recovered on having a few doses of this powder.

I do not think it is any way preferable to the antim. pot. tart. for cattle, and, when injudiciously administered, it certainly is quite as dangerous.

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## A CASE OF DISEASE IN THE TONGUE OF A COLT.

*By Mr. THOMAS MAYER, Sen. V.S., Newcastle-under-Line.*

HAVING about twelve months ago met with a case similar to that of Mr. Howell's, which may be interesting to the junior parts of the profession, I herewith send it to you.

The affection of the tongue occurred in a two-year old blood colt, which had overgrown its strength, and was thin, and out of condition. The coat looked staring; the faecal discharge was very foetid, of a chalky colour, and consisting of a good deal of mucus. There was febrile action accompanying this general derangement of the digestive organs. The tongue was much swollen, very indurated, and on the sides and under part of it, from the frænum to the tip, full of ulcers, exceeding in some the size of a pea; and in others being from two inches and a half long to half an inch wide, the edges being jagged, and containing, in the interior, sloughs extending to different depths, a yellow, dry, curdy matter, as if it had been produced by aquafortis. This sloughing process went on for nearly six weeks, the sloughs allowing to be excavated out, leaving a deep irregular hollow, of

a dark sanguine hue. From its swollen state we were necessitated to nurse the animal principally upon oatmeal gruel, linseed tea, oatmeal and water, and bran mashies, made sufficiently sloppy so that he could suck or gather it up.

Considering that these affections of the tongue, except when injured from accidental causes, as well as canker in the mouth, as arising from dyspepsia, and consequent heat of the stomach, we set to work by regulating the bowels and liver by alterative doses of aperients, administered from time to time, and by pursuing an antiphlogistic treatment. It was some time before we got the bowels into healthy order; but in proportion as we did, the tongue took on a more healthy action. Towards the middle period we adopted a mixed treatment, giving his drinks in ale, and during the latter portion of the period we gave tonics containing the mineral salts.

Locally, we fomented the under part of the jaw along the tongue, and frequently washed the mouth out with tepid water, keeping it as clean as possible. The affected portion was anointed with mild digestive oils: ultimately we rubbed the iodine ointment well in under the throttle. By this mode of treatment the colt gradually recovered his general health. The very indurated state of the tongue slowly decreased; the ulcers became healed up, and the tip of the tongue was saved; but at one time we expected it to slough off to some extent.

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## CASES OF DIFFICULT PARTURITION IN THE MARE AND COW.

*By Mr. JAMES HORSBURGH, V.S., Dalkeith.*

Sir,—IN looking over the pages of this month's Journal, I find a case of placental presentation recorded by Mr. J. D. Harrison; and as I had a somewhat similar one lately, I send you an account of it, though at the same time I consider it quite distinct from and unconnected with the placenta, and have no doubt that, if Mr. H. had had the good fortune to have been called in time, he would have found the same in his case.

On the 9th of May last, I was sent for to attend a mare belonging to Mr. D. Scott, of Ormiston. She had begun foaling the day before, and, as they thought, inversion of the uterus was taking place. I found her very weak from the long-continued exertion to expel the foal, and a substance in the vaginal passage, of a yellow colour and about the size of an ordinary person's head. This projected considerably beyond the vulva every time the pains



returned, which, I was told, was about ten minutes, and it was forcibly held back by a stout fellow every time these labour pains came on.

I got the mare on her feet the better to make my examination, and found a firm hard body beyond this substance, which I had no doubt was the head of the foal. A pain coming on, I had no hesitation in cautiously making an incision through what I found to be a substance resembling coagulable lymph, firmly organized. On enlarging my incision, the head presented itself, covered with the placental membrane; and I had the pleasure of extracting a fine foal, alive.

In a few minutes I removed the placenta, and had then an opportunity of more particularly examining the nature of the obstruction. I found this substance firmly adhering to the os uteri, about two inches in thickness, and, when dissected away, it was nearly eight pounds in weight. I afterwards understood that it had appeared a little at the last parturition, about a year before. The mare, with proper medicine, nursing, &c. did well.

I consider this case as being analogous to some in the cow, which much oftener occur, and in which the os uteri is closed with a substance that attains a cartiliginous firmness, and does not yield when parturition begins. I have met with cases in which I could introduce the hand, and sometimes only the fingers. In other cases there was no opening at all, after, perhaps, the animal had been twelve hours in labour; for, as you well know, our assistance is never required in these cases until all the owner's resources are completely exhausted. I never hesitate to use the knife as already described in *THE VETERINARIAN*, and with almost uniform success; however, a case came in my way lately, in which I could be of no service; but I had an opportunity, for the first time, of examining the parts after death, and, though at the risk of making my letter rather long and tedious, I will relate it.

The cow belonged to a farmer about five miles distant. I met one of his servants at another farm, at which I had been visiting, who told me that the cow had been *very ill* for two days,—that Mr. S. had had *Willie Menros*, an old shepherd, and one of those wisecracks reputed to have *meikle skeel amang kye*, to see her, who had said *she might calve and might not*, as the calf was lying the wrong way; and so, without putting himself to any further trouble, he left the poor animal to her fate.

The servant urged on me the propriety of going and trying to relieve her; but not being called in, and well knowing that it was no desirable case, I at first declined: however, as I had been attending a horse at the same place but a few days before, we

came to the conclusion that I should call to see the horse, and then they would have an opportunity of shewing the cow. I examined my patient accordingly and had been for some time about the place, and had my horse out in order to take my departure, when Mr. S. remarked, "We have a cow rather ill; come and see her." I went, and found her not *rather ill*, but dying. I examined the parts, and found it one of those cases in which there was no opening whatever to the uterus.

I told Mr. S. that there was no hope of saving the cow; but if the calf was living I might possibly save it. I proceeded to operate, but the additional torture to the poor dying animal made me desist, with the intention of extracting the calf by the Cæsarian operation immediately on the death of the mother. This in a very short time I had an opportunity of doing; but the calf had also died in the long-protracted struggle.

I had then a fine opportunity of examining the parts. I had found the calf in a natural position. The uterus was much inflamed. The stricture (about four inches in length) was corrugated longitudinally and of a cartilaginous hardness, so much so, that I could not force a passage with the finger, but found a blunt-pointed stick to answer the purpose. I removed the uterus by dividing the vagina about four inches posterior to the stricture, and, with the hooked bistoury, made an incision longitudinally through one of the sides of the cartilaginous substance. The parts were immediately dilated, until I could with ease introduce my hand. On making the incision on the other side, the corrugations gave way. The insertion of both hands through the os uteri dilated the parts to their natural size; and I had no doubt, had I been called in time, I should have saved both calf and mother.

This, Sir, if you have nothing better at hand, may fill up a corner in your truly valuable Journal: it will, at least, shew the folly and impropriety of employing these ignoramuses.

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## A CASE OF ABSCESS IN THE LEFT HEMISPHERE OF THE BRAIN IN A MARE.

*By* HERR LA NOTTE, *of Lauenburg.*

A FIVE-YEAR-OLD high-bred grey mare was treated by me for dangerous catarrhal inflammation of the throat. After a lapse of a fortnight the animal was so far recovered as to be capable of light work. About four weeks from the period when she was

first taken ill she suddenly lost her appetite, hung down her head, appeared dull and heavy, and moved with difficulty. In two days from this time the animal appeared much worse, and a hard insensible swelling was visible on the outer surface of the scapula. The pulse was small and quick, the breathing unaltered, and the eyes nearly closed. The mucous membrane of the nose was very red, and the palpitations of the heart perceptible. On the third day after the appearance of this affection the mare suddenly fell, and never rose again. She died forty-eight hours afterwards.

The following symptoms exhibited themselves while the animal lay on the ground :—The temperature of the skin was variable, sometimes burning hot, at others icy cold ; the eyelids remained closely shut, and, if pushed asunder, the cornea looked cloudy and covered with a viscous coat of mucus ; the mucous membrane of the nose and conjunctiva were of a deep red hue ; the pulse was quick and soft, and increased from 70 to 90 pulsations per minute. The palpitations of the heart were sensible on both sides, and the breathing became loud and laborious. The animal shewed not the least sensibility though pricked with sharp instruments, and pushed and struck.

Hence I was led to conclude that the disease was some affection of the brain, and to institute a treatment adapted to it, consisting in bleeding, cold fomentations, strong embrocations rubbed into the throat and back, setons, rowels, &c., all of which were useless. The symptoms continued to increase ; paralysis came on ; the urine and dung were voided without any effort of nature, and death soon afterwards supervened.

On post-mortem examination we found the liver soft and chocolate coloured, traces of inflammation in the lungs, great distention of all the vessels of the membrane of the brain, and, between the dura mater and the left lobe of the brain, a collection of yellow matter of the consistence of cream, and which might, perhaps, have amounted to an ounce. The pia mater appeared to be somewhat thickened in this place, and the surface of the brain corroded. The substance of these parts appeared to be softer than is natural.

As no external evidence of affection of the brain was perceptible I might have been led to consider the formation of these abscesses as a metastasis of disease, which supervened on or was produced by the previous catarrhal affection.

Of all the diseases of horses, none are so liable to be mistaken, and in none is it so difficult to discover their actual seat, as in catarrhal affections. These metastases appear in the diseases of the mucous membrane of the air-passages, or in the secreting



membranes, or cellular tissue, or the synovial skin, or in an affection of one of the serous membranes. It is always difficult to define their actual seat, and it too frequently happens that this important point is not ascertained until after the death of the patient.

*Magazin für die gesammte Thierheilkunde*, 1841, p. 34.

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### A CASE OF DROPSY OF THE GLOBE OF THE EYE PREVIOUS TO BIRTH (HYDROPTHALMUS CON- GENITUS) IN A LAMB.

*By the same.*

AMONG the diseases which affect the eye, dropsy of the globe of it is one that is seldom observed in our domesticated animals, but which may, in most cases, be considered as incurable. The seat of it cannot always be satisfactorily ascertained: it may be confined to the anterior or posterior chambers of the eye, or it may exist in both at once.

The first-named form—dropsy of the anterior chamber of the eye (*hydrops camerae anterioris*), consists in an alteration of the quantity of aqueous humour; while the second—dropsy of the lens (*hydrops corporis vitrei*), is a collection of matter in the cellular tissue of the lens, whereby an effusion into these organs is established. The conjunction of these two alterations of structure forms compound dropsy.

The case which I am about to describe is one of dropsy of the lens, and is the more serious, as the disease existed prior to birth, and was a *vitium congenitum*. As there is not, to my knowledge, any existing record of a case of dropsy of the anterior chamber of the eye existing previous to birth, the following may prove not uninteresting.

This disease was observed in an eight-day old lamb that was perfectly formed in all other respects. Both the eyeballs were considerably swollen, especially the left one, which was nearly as large as a dove's egg. The pupils of both eyes were drawn towards the near angle, and only about one-third of the smooth dark cornea was visible when the animal unclosed its eyes. The chief swelling or enlargement of the eyeball was perceptible on the outer side, and, notwithstanding its enormous size, the eyelids were capable of closing. The lamb was quite blind, but it recognized its mother by the sound of her bleat, and sucked her whenever it felt hungry. As the value of the animal was depre-

ciated by this mal-formation, it was killed, and the following were the appearances presented on dissection.

The bony parietes by which the eyeball is surrounded were not so large as the softer organs, so that the side and superior part of the socket were merely connected together by cellular tissue. The aperture of the left eye measured  $1\frac{5}{8}$  inches from one corner to the other, and  $1\frac{3}{4}$  inches from above to below; while the right one measured  $1\frac{1}{2}$  inches in length, and  $1\frac{1}{4}$  in breadth.

The anterior chamber of both eyes was unusually small, and contained a scarcely perceptible quantity of watery fluid. The iris of the left eye appeared to be very much contracted, so that only a small opening existed. The posterior chamber of both eyes was enormously distended by a clear watery fluid, and the iris was wanting in both eyes. The crystalline lens existed in its natural form and size in the right eye, but was not to be found in the left. The optic nerve was of the usual size, and all the other organs of the eye properly formed.

*Magazin für gesammte Thierheilkunde* 1841, p. 27.

## CASE OF SPASMODIC MUSCULAR CONTRACTIONS.

*By* M. JUSTINE FERDINAND MASURE, *M. V. à St. Mère Eglisé.*

ON the first of September, 1837, at 7 o'clock, A.M., I was desired to visit a mare that had been taken ill during the night, and that was now trembling all over, and threatening to fall every instant.

*Previous history.*—I found her in good condition. She was not naturally more irritable than her neighbours, she had worked on the preceding day apparently without inconvenience, and, indeed, on the preceding evening had done so until past sunset, and had been dismissed into the meadow as soon as she was unharnessed. She worked always in the shafts, but did not draw more than her companions. Early this morning, the boy that had the charge of her found her fixed on her four quarters, without having fed or shifted her place.

*Symptoms.*—When viewed from a situation immediately in front, the eye was open, and had a cheerful expression; but she was labouring under general convulsive muscular contraction, the vulva and the anus being excepted. The muscles of the limbs were so strongly contracted, that the tendons which ran along the cannon bones were as hard as cords, particularly those which be-

longed to the extensors. As she lay, she seemed to experience great difficulty in lifting her feet from the ground; so much so, that it seemed as if they were fixed to the ground. She had an almost continual balancing motion, from before backwards; and sometimes, but not often, from one side to the other. When these spasmodic contractions were most violent, her falling seemed almost inevitable: nevertheless the animal never fell all at once, neither did she willingly lie down. The spasms seemed to be stronger in the posterior than the anterior quarters. The muscles all seemed to contract independently of each other, so that some one or two of them assumed the appearance of a tightened cord. This soon relaxed, and others were violently affected. Sometimes the muscles on one side were contracted without the corresponding ones on the opposite side being at all affected; and then suddenly, and for a few moments, they would contract spontaneously, but violently, on both sides.

Wishing to ascertain whether the animal could walk, I desired one of the servants to endeavour to get her out of the stable. To my astonishment she walked without the slightest difficulty. She trotted just as if nothing was the matter with her; and one would readily believe, when seeing her in action, that she was in perfect health and spirits. No sooner, however, did she reach the stable, or stand still in the yard, than all these mysterious phenomena again appeared. In other respects the animal seemed to be in full possession of its natural powers. She recognised the voice of her conductor. Her sensibility did not appear to be in the slightest degree impaired, but, on the contrary, she shrunk when the least pressure was made on the vertebral column. The pulse was a little quickened, the respiration agitated, and often cut short by spasmodic contractions of some of the abdominal muscles; the mucous membranes were slightly injected; the animal tried, from time to time, to masticate a little hay. The dejections were of their natural colour and consistence. She was in this state almost the whole of the 1st of September.

*Causes.*—The accounts which I have obtained as to the cause of the disease are very unsatisfactory. The most probable is this:—When she returned from work and was unharnessed, and covered as she was with sweat, she was turned out to feed; there consequently was a sudden stoppage of the perspirable function, and this is an occasional cause of some of the most serious maladies. It is also to be recollected, that at this time of the year the days were warm, and the nights beginning to get cold; and, still farther, the rain fell in torrents during the whole of this night.

*Treatment.*—I could not doubt for an instant that this mare



was attacked by a nervous disease affecting the muscles of locomotion: then my first care would be to relax these organs, and to diminish their erethism. In order to accomplish this I effected a copious bleeding of 11 pounds from the two subcutaneous thoracic veins. I had a little trouble in accomplishing this, from the continual contractions of the surrounding muscles. I then prescribed vapour-baths, and fomentation with hot water under the belly—the animal being covered with a thick cloth to concentrate the vapour as much as possible. These baths were repeated three times in the day. In the intervals between these baths considerable friction was applied to the skin, and the mare was kept as warm as possible.

A mixture, composed of powdered valerian, opium, camphor, empyreumatic oil, and honey, formed the basis of a drink that was given morning, noon, and night. A decoction of poppy heads was also administered every hour. She had likewise injections of boiled mallow roots and flower. Her diet was much restricted. It was thin gruel made of barley-meal.

In the evening I found my patient in nearly the same state as when I left her, except that I could not help fancying that the spasms had diminished both in number and intensity. I renewed the bleeding, taking about 7 pounds of blood from the brachial veins. The other treatment was ordered to be continued.

At 6 A.M. on the following morning the animal was more tranquil than on the preceding evening. The spasms were diminished both in frequency and power. She searched among her litter for something to eat; the respiration was less agitated; the pulse regular, and the alvine dejections of their natural state. The same medicine was given, and the same applications made, but only half so often. The gruel was continued, and 6 pounds of hay allowed in the four-and-twenty hours.

3d.—The symptoms of disease have vanished, and any one would have said that the animal had not been ill at all, so gay and full of spirits was she. All medicine was now suspended, and the mare gradually returned to her usual food: as, however, the state of the atmosphere was not very satisfactory, for it continued cold and rainy, I induced the proprietor not to turn her out at night, and not to let her commence her work until eight days had passed. I have seen her several times since her recovery, and there is not a trace of disease about her.

When I first attended on this animal, and had carefully observed all the symptoms that presented themselves, I was perfectly assured that it was a case of neurosis; but of what kind? I at first thought of tetanus. It had resemblance to that disease in some of its symptoms; but there was no identity as regarded

the permanent contraction of the muscles—no sinking of the eyes into their orbits—no jaw covering a great part of the eye—no perfect closure of the jaws, no rigidity of the limbs—these symptoms, characteristic of tetanus, did not exist here. The office of locomotion, when the animal was urged to it, was performed with as much suppleness and lightness as before the disease. All these considerations led me to believe that it was one of the neuroses, and not tetanus, with which I had to combat; and my treatment coincided with this belief.

*Mém. de la Société du Calvados, 1840.*

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## INTERMITTENT GASTRO-ENTERO HEPATITIS, OR INFLAMMATION OF STOMACH, SMALL INTESTINES, AND LIVER IN AN OX.

*By M. REBOUE; M. V. à Coursan.*

ON the morning of the 11th of April, 1836, I was sent for to see a young ox, that, after a slight indisposition of four or five days, began to refuse his food, and appeared to be attacked by serious disease.

*Symptoms.*—His head drooped, and often rested on the manger; the eyes were dull, half closed, and suffused with tears; the muzzle dry and hot; the mouth hot and clammy; the edges of the tongue of a deep red colour, while the rest of the buccal mucous membrane was of a yellow tint; the breath hot; the pulse hard, wiry, and quick; the respiration frequent and laborious; the conjunctiva of a deep yellow colour; the thirst extreme; the rumination suspended, and the appetite gone. The right hypochondrium was very sensible to pressure, and the animal would remain several minutes with his muzzle turned upon it. He lay down from time to time, but rose again immediately; the urine was thick and oily; the alvine dejections unfrequent, and black; the skin was dry; the hair staring; the flanks drawn up; and change of position painful.

*Causes.*—For some time this beast had been put to very hard work; and, six days before, had been driven at a great pace through a violent storm of rain, he at the same time being covered with perspiration.

*Treatment.*—I did not bleed from the jugular, for experience had taught me that it was only serviceable at the commencement of these diseases, and this beast had exhibited symptoms of illness five days before; but I opened the right subcutaneous

thoracic vein, and there flowed from the orifice a black and adhesive fluid, which afterwards became less tenacious, and of a red colour. Every second hour we gave some gruel with nitre, which the animal readily swallowed after it was mixed with a sweet and pleasant drink. An injection from boiled marsh-mallow roots was thrown up every second hour. Emollient vapour baths would have been tried had it not been for the impatience of the beast.

12th.—He is decidedly better. His urine is more abundant, but he has only voided a little hard and black dung. I now bled him from the left subcutaneous thoracic vein, and applied a strong sinapism over the middle of the right hypochondrium. The regimen and medicine the same.

13th.—Still better; the countenance is clearer; the pulse is more developed; the thirst is abated, and the appetite is beginning to return. The alvine dejections are softer, and the urine clearer. The hypochondrium on which the blister had been placed is much tumefied. I effected several deep scarifications on this part, and a considerable quantity of blood escaped. The drinks were rendered somewhat more palatable, and a very small quantity of hay was allowed. After the blood had ceased to flow from the tumefaction on the hypochondrium, a linseed poultice was applied, and changed every fourth hour.

14th.—The countenance is brightening up; the appetite better; the urine natural and less abundant, but the excrement yet covered with glairy mucus. A purulent serosity was discharged from the wounds in the hypochondrium. These were dressed with ung. basil.

15th, 16th, 17th, 18th.—Improving; but being somewhat costive, drinks of cream of tartar and sulphate of soda were administered. The cure was complete on the 24th. The conjunctiva and buccal membranes had then assumed their natural colour.

On the 27th of May, in the same year, the weather being hot, he and his companion were sent to work; but from a sudden rise of the water in the river Oude, they were compelled to swim over part of the stream. On the following morning he was dull, refused his food, and ground his teeth.

29th.—He is still more depressed; the appetite is quite gone, and the usual symptoms successively appear. The yellow colour of the mucous membranes in fever was peculiarly evident.

Two bleedings, the one at the jugular and the other at the tail; proper regimen, and sweetened nitrated drinks, with emollient injections, effected a cure by the middle of June. The yellow colour of the mucous membranes had once more passed away. Hitherto the disease has been somewhat suddenly ex-



hibited and under the influence of determinate causes, easy to be appreciated; but, later, its appearance was more gradual, and the causes of its return more obscure.

In the beginning of September, the same beast was attacked with serious lameness. He was kept for some time in the stable, from which he seldom accompanied his fellows to the water-troughs in the yard. In twelve days' time, however, he was apparently well again; but, on the 16th, without any known cause, he again lost all his spirit—he was continually yawning and grinding his teeth—his muzzle was dry—his respiration quick and difficult, and his coat was sadly rough. Supposing it to be a new attack of the old disease, the bailiff hastened to summon me.

As he supposed, the malady which now offered itself was no other than a return of gastro-entéro-hépatite, the symptoms of which have been already related.

Two bleedings, of 8 lbs. each from the jugular, and other medical treatment, as before, restored him to health.

From this time to the end of March 1839, he had at intervals, approaching nearer to each other, repeated attacks of this disease. They remained longer upon him, and they were now evidently undermining his strength and energy. The intervals varied from two to six months. His strength, however, evidently wasting, he was ordered to be destroyed.

Several days after this I happened to see the same ox in the possession of the man who bought him. I remonstrated with him, and obtained a promise that he would sell him to a butcher in the neighbourhood of Narbonne. I very much desired to have been present at the post-mortem examination, but not having been made acquainted with the time, I was disappointed. I could only see the liver, which had not been offered for sale on account of its diseased appearance. It was of a deep yellow colour, with brown spots of various sizes, and was also softened in several parts, and gave way at the slightest touch. There were also seven or eight caverns, in which were found many calculi, of which the colour, the quantity, and the consistence were variable.

Enough, however, has been observed to justify us in placing this in the list of new diseases. The existence of this malady being demonstrated, where shall we find the cause of the return of these intervals, giving a character of intermittence so well defined?

This question appears to me very difficult to answer, and I leave to others the honour of resolving it in a satisfactory manner. I may, perhaps, be permitted to ask, whether hepatitis was the original disease, or whether it was consecutive to the gastro-intestinal inflammation? I am inclined to think that the first of

these suppositions has been nearly or quite demonstrated. The yellow colour of the mucous membranes was invariably the first thing observed, and it usually preceded the other indications, two days at least.

*Journal des Vét. du Midi, Avril 1840.*

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## THE EXCITO-MOTORY NERVOUS SYSTEM OF DR. MARSHALL HALL.

To contemplate what was the state of our knowledge of the Physiology of the Nervous System but a few years ago, and what we presume it to be at the present day, is, indeed, a proud boast and source of exultation to the medical philosopher. It is almost enough to fire his mind with hopes that, one day or other, the connexion between flesh and spirit shall be divested of some of that mystery in which it has ever appeared involved to the earthly mind of man. The new and brilliant lights cast upon the mysterious functions of the brain and nerves owe their production to physiologists partly continental and partly—to our credit and praise be it said—of our own country. This is, at least, one of the glorious consequences of peace. Now men, the most eminent of all nations, find themselves engaged in one noble undertaking, in the advancement of science, which, by their united labours—*vis unita fortior*—cannot but be more or less completely effected to their reciprocal honour and advantage, and that of the nations of which they are the proud ornaments. The names of Legallois, Flourens, Majendie, Müller—of Bostock, Bell, Mayo, Hall, and others, stand, in connexion with our present subject, in bold *alto relievo*, engraven upon the tablets of fame and posterity.

The brain has long been acknowledged to be the fountain of sense and source of volition—the seat of mind—the habitation of the immortal soul; and the nerves have been regarded as the conductors to and from this *fons et origo*, and every other part of the body.

Flourens has satisfactorily demonstrated that these properties reside exclusively in the cerebrum; that that organ once destroyed, or so compressed as to annihilate its functions, the animal is deprived of all sense and power of motion. In connexion with which, and indeed in seeming contradiction of it, we have from the same eminent physiologist, and from Majendie, the astounding fact, that this source of sensation and volition is *itself* incapable either of feeling or producing motion. The substance of the cerebrum may be pricked, burnt, torn, or lacerated to any

extent, without inducing any expression of pain or contraction in the muscular system.

The spinal marrow is to be regarded as a process from or prolongation of the cerebrum, or as a large nerve emanating from it; and hence the reason why the nerves of the body, generally speaking, are derived conveniently from the spine, instead of the brain itself.

Formerly it was believed that the properties of sensation and volition were conducted to and from the brain and different parts of the body by the same cord of nervous filaments: the *double* roots the spinal nerves possessed were not understood or explained until their utility and distinctness in function were shewn and proved beyond all dispute by the beautiful experiments of Sir Charles Bell. It is now known that the anterior nerves are those conveying the motive mandate or power, while the posterior simply endow parts with sensibility; and it is believed that the corresponding columns of the spinal marrow possess similar endowments; though this latter is, according to some, a doctrine requiring further confirmation. A rabbit being struck behind the ear so as to deprive it of sensibility, Sir C. Bell exposed the spinal marrow. On irritating the *posterior* roots of the nerves, he could perceive no motion consequent in any part of the muscular frame; but on irritating the *anterior* roots of the nerves, at each touch of the forceps there was a corresponding motion of the muscles to which the nerve was distributed. Every touch of probe or needle on the threads of this root was attended by a muscular motion, as distinct as the motion produced by touching the keys of a harpsichord. "These experiments," concludes Sir Charles, "satisfied me that the different roots and different columns whence these roots arose were devoted to distinct offices, and that the notions drawn from the anatomy were correct."

Although this experiment, with other similar ones, sufficiently shewed that through the anterior nerves, and them alone, muscular motion was excited, still there was no direct proof that the same nerves were the conductors of *voluntary* motion. This disputable point was afterwards cleared up in the following beautiful manner by Professor Müller:—"If we divide," says the Professor, "in the same frog all the three posterior roots of the inferior extremities on the left side, and all the three anterior roots of the nerves on the right side, sensation in the left leg, and motion in the right leg, are destroyed. If we then cut off the foot from the right leg, which retains sensation but not motion, the frog manifests, by motion in all parts of its body, the utmost pain; but the right leg, which is the seat of pain, is immoveable.



If, on the contrary, we cut off the foot from the left leg, which retains the power of motion but no sensation, there is total insensibility. This experiment is the most surprising of all, and affords decided, not uncertain results; because, in the frog, we may cut wholly through the roots of the inferior extremities, the roots being very few, but thick. These experiments place beyond all doubt the truth of Bell's doctrine."

Reasoning upon this new and valuable discovery, Sir Charles Bell observes, "It has hitherto been supposed that the office of a muscular nerve is only to carry out the mandate of the will, and to excite the muscle to action: but this betrays a very inaccurate knowledge of the action of the muscular system; for before the muscular system can be controlled under the influence of the will, there must be a consciousness or knowledge of the condition of the muscle"—whether it be already in a relaxed or contracted condition, a state of action or inaction. A limb already straightened can in the rectilinear direction be extended no further; for any motion to be given to its component parts, the mandate to flex or bend them must be given. Consequently, "To the full operation of the muscular power," still quoting from Sir Charles's work, "two distinct filaments of nerves are necessary, and that a circle is established between the sensorium and the muscle: one filament or simple nerve carries the influence of the will towards the muscle, which nerve has no power to convey an impression backwards to the brain; and another nerve connects the muscle with the brain, and, acting as a sentient nerve, conveys the impression of the condition of the muscle to the mind, but has no operation in a direction outward from the brain towards the muscle, and does not, therefore, excite the muscle, however irritated." In the cases on record, in which there was an entire loss of sensation, while the muscular power was retained, it was necessary for the patients to keep their eyes steadily fixed upon any thing they wished to hold in their hands, or, from the grasp discontinuing, it would fall to the ground. Here, then, is an excellent illustration of "the consciousness or knowledge" required for the performance or continuance of any muscular action: at the same time that it is an instance to shew, that, however distinct the attributes or endowments of sensation and motion may appear to us to be, they are in function indissolubly bound together in the animal economy. The condition of the muscle, then, being made known by the sentient nerve to the brain, or nervous centre, an influence is *reflected* along the motor nerve, which occasions the contraction of the muscle; thus "establishing a circle" of nervous action or influence "between the sensorium and the muscle."

The *modus operandi* of that divisional portion of the entire nervous system which Dr. Marshall Hall has designated the “excito-motory,” will be best understood by keeping these established facts, concerning sensation and voluntary motion, immediately in view. This division of the nervous system, though distributed to parts whose actions or functions are commonly carried on without our knowledge, and over which the will has little or no controul, still, like the voluntary system, appeared to require some stimulus of action, as well as some transmission of the state or condition the part to be acted upon was already in. A knowledge of the state or condition of the part is conveyed to the common nervous centre—the spinal marrow—by a nerve corresponding to the sentient, which is called an *excitor*, and from thence is reflected a motive influence along a distinct nerve, which is called a *motor*; the two sets of nerves running either together, as in the extremities, or going to their respective destinations apart from each other, and along with voluntary or sentient nerves, as in the thorax and head.

The old division of the entire nervous system was into the *cerebro-spinal* and *ganglionic* or *sympathetic* departments: to these Dr. M. Hall proposes to add a third, which, from its organic seat and uniform mode of action, he has designated the *true spinal* and *excito-motory* subdivision. His words on the subject are:—

“Viewing the cerebral or cerebro-spinal portion of the nervous system as the organic seat of mind—of sensation, perception, judgment and volition—and the ganglionic as that of the source of the movements of the *internal muscular organs*, of *nutrition*, *secretion*, &c. it has become obvious that there is an intermediate portion of this system, not formerly known; viz. that of *all the functions of ingestion and egestion*, of *exclusive retention*, *expulsion*, &c. This subdivision of the nervous system includes the respiratory system of Legallois and Sir C. Bell, under a new aspect. I have designated it, for the present, from its organic seat and the uniform mode of its action, the true spinal and excito-motory. The nervous system must, therefore, now be divided into—

- I. The Cerebral, or that of Sensation and Volition;
- II. The True Spinal, or that of the movements of Ingestion and Egestion: and,
- III. The Ganglionic, or that of the movements of the Internal Muscular Organs, of Nutrition, Secretion, &c.”

The following experiment of the doctor’s upon a frog will illustrate what he means by *excito-motory* phenomena, as distinct from, and in a measure independent of, such as are properly *cerebral*:—

“You observe this living frog. Its sentient and voluntary functions are obvious. I will divide the spinal marrow below the occiput with these scissors:—all is still. There is not a trace of *spontaneous* motion. The animal would remain in this very form and position, without change, until all signs of vitality were extinct. But now I pinch a toe with the forceps. You see how both posterior extremities are moved. All is now still again; there is no spontaneous motion, no sign of pain from the wound made in the neck. It is without sensibility—without volition; the *power* to move remains—the *will* is extinct. I now pinch the integument. You observe the result—the immediate recurrence of excito-motory phenomena.—I now destroy the whole spinal marrow with this probe. It is in vain that I pinch the toes: the animal, the limbs, are motionless.—Could the former *excited* motions be those of *irritability*? I will try the truth of this suggestion, by seeing whether, now that the axis of the excito-motory system (the spinal marrow) is destroyed, with its phenomena, the application of a slight galvanic shock will prove the subsistence of irritability. You see how instantaneously and forcibly the muscles are stimulated to contraction. Is not the proof from these experiments, of the distinction between the motions of volition of the excito-motory system, and of those of irritability, perfectly and unequivocally complete?”

The amount of knowledge we derive through this experiment, supposing the deductions of the Doctor to be legitimate, is, indeed, of the utmost value to us both in a physiological and pathological point of view: we now know—or appear to know—that there exist *three* kinds of nervous power or influences,—a cerebral, a spinal, and a purely nervous or ganglionic one; and that these may not be supposed to reside only in inferior, but also pervade the superior animals, the Doctor made the following experiment on a horse:—

“A horse was struck with the poll-axe over the anterior lobes of the brain. It fell instantly, as if struck with a thunderbolt: it was convulsed, and then remained motionless. It shortly began to breathe, and continued to breathe freely by the diaphragm. When lacerated or pricked by a sharp or pointed instrument, as a *pin* or a *nail*, on any part of the face or surface of the body, it was totally motionless, manifesting no evidence of sensation or volition. When, on the other hand, the *eyelash* was touched with a straw, the eyelid was forcibly closed by the action of the orbicularis. When the cornea was touched, the eyeball revolved outwards by the action of the *abducens*. When the verge of the anus was touched, the *sphincter* contracted forcibly, the tail was raised and the vulva was drawn towards the anus. The



upper part of the medulla oblongata was now destroyed by an instrument passed through the orifice made by the poll-axe: there were violent convulsions; the respiration ceased, and the eyelid and eyeball remained motionless on the application of stimuli.

"The blow with the poll-axe annihilated the cerebral or sentient and voluntary functions, and a peculiar set of excito-motory phenomena remained. Deep lacerations produced no evidence of the former; the touch of a straw induced a full manifestation of the latter. The destruction of the medulla oblongata removed all trace of excito-motory phenomena in the eyelid and eyeball."

Here, as in the case of the frog, the distinction between such functions as originate from the cerebrum and such as belong to the spinal marrow—of which the medulla oblongata is a prolongation—became evident; it was also manifest—as Sir C. Bell had proved before—that the continuance of respiration depended upon the medulla oblongata; and could the spinal marrow have been destroyed, no doubt the same results would have been obtained, demonstrating the remnant of vitality—*irritability*. Moreover, there is an important conclusion likewise deducible from these and like experiments—that although vitality may be removed as it were, and for a time maintained in the headless trunk, yet that this life even—which may be regarded as purely organic—cannot be continued in the absence of the brain. Indeed, not only is it in nature impossible for one part of the same—the nervous—system to subsist without the other, but equally impossible is it for any one complete system to continue in action without support from others of the body. Of the different systems of which the animal economy is composed—the nervous, the circulatory, the respiratory, the digestive, &c.—every one is reciprocally dependent, and all are essential to the maintenance of life and health.

It has been seen that, even after decapitation, if the spinal marrow be exposed, and any part of it stimulated, the muscles to which the nerves coming off below the stimulated part are distributed are excited to contraction: the same effect is also produced by stimulating the nerves themselves. The agent or principle of action, which in this case evidently originates in the spinal marrow, or even in the nerve itself, being said—and indeed having been proved to be—the same incomprehensible influence which Haller called the *vis nervosa*; and which here manifests its action in a *direct* line or manner *from* the marrow or nervous centre *to* the extremity of the motor nerve. Nor was it known, or at least not demonstrated, until taught and illustrated by Dr. M. Hall,—that this same *vis nervosa* was, *independently*, capable of acting in a *retrograde* course; that it was

capable of transmission from the extreme branches and points of *incident* nerves along their trunks to their roots into the marrow or centre, and by a *reflex* operation back again along the *motor* nerves to *their* extreme ramifications: thus establishing a circle of action similar to the one already described as forming the *modus operandi* of the sentient and motor principle in the cerebral system. The following experiment will illustrate this:—

Dr. Marshall Hall took a turtle, and, having removed the head, laid bare the spinal marrow by sawing away a longitudinal portion of the shell. He then irritated the marrow by means of galvanic influence, the forceps, &c. At first, he had the phenomena of sudden motions in both the posterior extremities, and in the tail, according to the law of Haller. But he had also slower and more continual movements in the *anterior* extremities, establishing a *new law* of action of the *vis nervosa*, *upwards*, in the course of the spinal marrow. Similar experiments to this the Doctor admits had been made both by Flourens and Müller before, but then the animals experimented on had not been decapitated, and consequently the cerebral influence still remained;—sensation and volition were operating with, or at least their influence was not isolated from, the *vis nervosa*. From similar experiments on decapitated animals, the Doctor concludes that the *vis nervosa* not only acts in directions from the branches of nerves towards their trunks and into the spinal marrow, but upwards or forwards as well as downwards or backwards in the spinal marrow itself. He also discovered that it was not absolutely necessary to stimulate the nervous fibres themselves to demonstrate this retrograde action, but that it was equally manifested by irritation or titillation of the *cutaneous* or *cutaneo-mucous* surfaces of the body: on being irritated, the eyelids closed and the sphincter ani contracted. From all which the Doctor concludes that he has, “physiologically speaking,” demonstrated the existence of “a new kind of nerve;” that is—

“I. An Incident Motor Action; and,

II. An Incident Motor Nerve;”

the two combining the *excitor* and *motor*—or, in one word, the *excito-motory* power. Moreover, the Doctor presents us with the following as the

## TABLE OF THE ANATOMY OF THE TRUE SPINAL SYSTEM.

I. The Incident Motor Branches.	II. The True Medulla Oblongata and Medulla Spinalis, the Centre of the System.	III. The Reflex Motor Branches.
i. The Trifacial arising from— 1. The Eye-lashes. 2. The Alæ Nasi. 3. The Nostril. 4. The Fauces. 5. The Face. ii. The Pneumogastric, from— 1. The Pharynx. 2. The Larynx. 3. The Bronchia. 4. The Cardia, Kidney, and Liver. iii. The Glosso-Pharyngeal. (?) iv. The Posterior Spinal, arising from— 1. The General Surface. 2. The Glans Penis vel Clitoridis. 3. The Anus. 4. The Cervix Vesicæ. 5. The Cervix Uteri.		i. The Trochlearis } Oculi. ii. The Abducens } iii. The Minor Portion of the 5th. iv. The Facial, distributed to— 1. The Orbicularis. 2. The Levator Alæ Nasi. v. The Pneumo-gastric, or its Accessory. 1. The Pharyngeal. 2. The Œsophageal and Cardiac. 3. The Laryngeal. 4. The Bronchial, &c. vi. The Hyo-glossal. vii. The Spinal Accessory. viii. The Spinal, distributed to— 1. The Diaphragm, and to 2. The Intercostal, & } muscles 3. Abdominal } ix. The Sacral, distributed to— 1. The Sphincters. 2. The Expulsors, the Ejaculators, the Fallopian Tubes, the Uterus, &c.

Some of the “Incident Motor Nerves” are *sentient*; “but, whether sentient or not, they are demonstrably excito-motor, and, whilst they are *motor*, they are *incident*.”

“By the cerebral system, we are placed in relation to the external world *physically* or *mentally*; by the true spinal system, we are placed in a similar relation *physically*. As by the former we imbibe all our ideas, so by the latter we appropriate external objects to our very substance. On the true spinal system, all ingestion, all retention, all expulsion, in regard to the animal frame and economy, depend.”

“Every such act is a *spinal* act—a true spinal act, reflex in its form and character, accomplished through the medium of the incident and reflex nerves, and this connecting centre the true spinal marrow, and by the agency of the *vis nervosa*.”

In referring the *centre* of the excito-motory system of nerves to the medulla oblongata or spinalis, we are to understand that both those nervous bodies, as processes or prolongations from the cerebrum, belong to the *cerebral* system, and that only such parts of them as retain the *vis nervosa* after separation from the cerebrum belong to the excito-motory. These parts have hitherto eluded detection, or at least are at present, anatomically speaking, indemonstrable: though, as far as our knowledge extends at present, it appears that the *ganglionic* nerves are the voluntary,



or motor; and that the *ganglionic* are the centres of incident and reflex nerves, and of the reflex actions. "It remains," says the Doctor, "to be ascertained whether the *sentient* nerves belong to the ganglionic columns: but this seems most probable."

Sir Charles Bell, besides the nerves of vision, smell, and hearing, made *four* systems of the nerves,—of *sensation*, *voluntary motion*, *respiratory motion*, and the *sympathetic system*. Dr. M. Hall, in arranging all under three heads—the cerebral, true spinal, and ganglionic systems—includes Sir C. Bell's "respiratory" system in the true spinal; and thus interprets the *modus operandi* and nervous influence of the entire respiratory apparatus:—

I. Excitors.	II. Centre.	III. The Motors.
1. The Trifacial. 2. The Pneumo-gastric. 3. The Spinal.	The Medulla Oblongata.	1. The Spinal Accessory. 2. The Intercostal. 3. The Diaphragmatic. 4. The Posterior Lower Spinal, &c.

Respiration is a *mixed* function; i. e. it is either *cerebral* or *true spinal*, either under the influence of the will, or else, unconsciously to the animal, carried on by the excito-motory system. Ordinary inspirations are neither, according to Wilson Philip and Mayo, acts of volition or consciousness; nor, according to Bostock, Wilson Philip, and Brachet, acts dependent upon the pneumogastric nerves as nerves of sensation; nor, according to Legallois, Sir C. Bell, Flourens, and Muller, acts dependent upon the medulla oblongata as their *primum mobile*; but are excito-motory acts, excited by particular nerves, but still regulated and modified by volition. The first inspiration in the newborn infant is probably excited through the medium of the fifth and spinal nerves conjointly with the contact of the atmosphere: in after-life, the exciting cause of inspiration appears to be the presence of carbonic acid within the air-cells of the lungs, in contact with the fibrillæ of the pneumo-gastric nerves.

If carbonic acid in a pure form be applied to the larynx, or if the rima glottidis be tickled with a feather, the glottis instantly closes firmly; and these effects may be produced in an animal deprived of the cerebrum. The explanation is this: the *excitor* nerve, the superior laryngeal, conveys the excitation to the *centre*, the medulla oblongata; whence it is reflected along the *motor* nerve, the recurrent, to the larynx, producing the closure of it.

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[The name of the author of this beautiful sketch of the Excito-motory Nervous System the Editor is not permitted at present to divulge; but the period, we trust, is not far distant when our readers will know all about it.—Y.]

## ANEURISM, FOLLOWED BY RUPTURE OF THE HEART, IN A HORSE.

By F. C. HECKMEYER, V.S.

ON the 1st of April, 1831, I was requested to see a thirteen-year-old black mare, which, as I well knew, had been for some time broken-winded, and which was now said to be suffering from violent colic. Shortly after my arrival, the animal expired.

Outwardly there was nothing remarkable about the mare, excepting that the mucous membrane of the rectum was of a whiter colour than usually is the case.

On a *post-mortem* examination two hours after death, we found the chest to be completely full of coagulated blood, which appearance led me to suppose that the cause of death had been rupture of the aorta, arising from previously existing aneurism. The heart was in an unnatural state. I found the pericardium torn on the right side; and in the right cavity of the heart, at the distance of about five inches from the point, there was a rent or opening of about an inch and a half long, corresponding with that of the pericardium. The edges of this rupture were irregular and uneven, and giving rise to various filaments or threads. The walls of this cavity, especially near the place of the rupture, were thin, and, in consequence of this, dilated and elevated at this part, so that a perfect *aneurisma cordis* was here formed. The whole of the heart appeared to me to be enlarged.

The true cause of the formation of these *aneurismata cordis* was unknown. It might have arisen from hard work; but the rupture was doubtless caused by violent exertion and over-exercise, since the animal had contrived to get loose in the stall, made its escape, galloped for half an hour before it could be caught; and, as soon as this had been with much difficulty accomplished, and it was brought back to the stable, fell suddenly, and, after several ineffectual attempts to rise, died. In what manner the rapid motion and exertion, combined with the presence of the *aneurisma cordis*, produced the rupture of the heart, is worthy of inquiry.

The intestines were in their natural state, and, although the animal was broken-winded, the lungs appeared perfectly sound, and no trace of decomposition was observable in any part of them.

That celebrated French veterinarian, Godine, would here assert that the symptoms of broken-wind arose from the disease of the heart; but I cannot agree with him in his opinion on this point, as my own experience leads me to a very different conclusion. — *Magazin für de Gesammte Thierheilkunde*, 1841, vol. vii, p. 185.

## A CASE OF INFLAMMATION OF THE DIAPHRAGM IN A MARE.

*By* HERR F. C. HECKMEYER, V.S.

ON the 20th of March, 1840, I was requested to see a thirteen-year old brown mare. She was strong and well formed, active and spirited, and, as I was informed, had seldom or never been ill for a single day. On the morning of that day she had been ridden very hard, and thrown into a perspiration; she subsequently cooled, and then appeared unusually dull and stupid, and refused her food. I first saw her in the afternoon of this day. She was standing with her fore-legs apart, her head hanging down, her eyes half closed, her countenance dull and heavy, and she appeared totally insensible to all external impressions.

The expirations and inspirations were very laborious—the breath came in spasms or gasps, as if it was jerked out—and the short or false ribs became very visible, from the muscles of the belly being convulsed and drawn upwards. Sometimes the breathing was heard every second quite plainly, and not a single drawing of the breath was lost. The mare then became very anxious, turning round, choaking, and tottering, and her eyes appearing as if almost starting from her head. The air expired was not so warm as it usually is in cases of inflammation of the lungs.

From time to time there was a painful spasmodic cough, which seemed to come from the depths of the chest, and by which the flanks were very much drawn up, the head brought further under her than I ever before saw it, and the back curved upwards. After each of these painful coughs, if the breathing paused for a moment, a violent throbbing of the flanks took place. This gradually subsided, and the action of the flanks became scarcely greater than is usually the case in common inflammation of the lungs; but it was irregular, and quicker at some times than at others. The action or motion of the ribs was always spasmodic.

The mare appeared to suffer great pain when the ribs were pressed. The pulse was hard, wiry, very quick, and spasmodic. The mucous membrane of the nose and eyes was of an intense red, and injected with blood, the mouth dry and hot, the dung hard, the urine dark brown, the extremities, ears, and lips cold, the skin tightened, and both hunger and thirst altogether absent.

In bringing the animal to the hospital, a distance of not more than 400 paces, we were obliged to stop two or three times, as she would otherwise have fallen; but after a short rest, during which she stood with her fore legs wide apart and coughed several times very convulsively, she got on again.



I immediately abstracted 13 pounds of blood. When about half the quantity was taken, she opened her half-closed eyes and looked about her, and, when the bleeding was over, appeared comparatively lively. She was put into a loose stall well littered down with straw, and an emollient drink given composed of nitre, sulph. sodæ, and linseed meal.

Towards evening the cough became less laborious and painful. The animal was very uneasy, lay down several times, and immediately got up again, coughing very much whenever she did so. The hind legs, and especially the right one, was projected as far out as possible from the body, while the animal remained standing; indeed, it assumed the position in which it is usually placed when a horse rises up after a sound sleep. She was incessantly whisking her tail about, especially when she had lain down for a short time. During the night she appeared very thirsty, but drank very little, and that with apparent pain.

21st.—I repeated the bleeding. The animal became more lively, laid herself down, remained longer in that position, and began to snuffle in the straw: the act of swallowing appeared less painful. She manifested great thirst—pressure on the ribs seemed to give considerable pain—the cough continued troublesome and painful, and the animal was very uneasy. The action of the ribs and the flanks continued to be spasmodic, and the projection of the right hind leg and motion of the tail was the same. The medicine was continued, and a seton put between the fore legs, which soon began to act, and afterwards suppurated very well.

During the eight following days the mare got gradually better. An antiphlogistic course of treatment was pursued, and a regular dietetic regimen. She ate more every day, the cough became less painful and frequent, the appetite returned, and the patient appeared to be but little fallen away: but the motion of the tail still continued, as well as the peculiar position of the right hind leg. The mare lay down once only. When the weather was fine, the animal was walked up and down, led by a halter, and still all the functions proceeded with apparent regularity, excepting that a spasmodic cough sometimes was heard, and the breathing was slightly irregular.

On the 13th of April, after a gentle ride, the mare was brought into the stable to be fed, and did not appear to be at all heated or tired. She eagerly devoured the corn placed before her, and all the hay and straw she was able to draw from the racks of the horses nearest. About half an hour afterwards she suddenly threw herself down—a profuse perspiration broke out—she exhibited a disposition for mischief, broke both the halters, and ran,

with a tottering gait, after the other horses. She was then violently convulsed for a quarter of an hour, and died.

In a post-mortem examination, which took place on the same day, I found the whole of the *centrum tendinosum diaphragmatis* torn from the *pars musculosa*, so that a portion of the intestines lay in the thorax; the *centrum tendineum* was united to the *vertebræ lumbales* by the *crura diaphragmatis*. A number of filaments or threads depended from the torn edge of the *pars costalis diaphragmatis*, while a whole cluster of muscular fibres were perceptible on the *centrum tendineum*. The peritoneum, by which both the *pars musculosa* and the *pars tendinea* of the diaphragm are covered, was beset with small lumps or knots, which gave it a rough uneven surface. The liver was united to the *centrum tendineum*, by means of an exuded *lymphæ plastica*. The *pars musculosa* of the diaphragm was softer and less solid than is natural, and of a dirty whitish-red colour. When rubbed gently between the fingers, the filaments parted from each other without difficulty, and there appeared to me to be as little connexion between them, as is often found in horses that have died of inflammation of the intestines. All served to testify the existence, from the very first, of rupture of the diaphragm.

No other diseased appearances were observable. The whole of the peritoneum was sound, and also the liver, the spleen, and the intestines. The lungs were sound, and betrayed no signs of having belonged to a diseased animal; the pleura was, likewise, in its natural state, nor was there any abnormal increase of size either in the pleura or the lungs. The stomach was full of undigested food, and distended with gas. On its internal surface there was a gangrenous spot, and it appeared slightly inflamed.

In my opinion, the sudden death of the mare arose from her having eaten too voraciously, thus distending her stomach. In lying down so hastily, she pressed the distended and hardened stomach suddenly and violently against the diaphragm, which, in consequence of the previously existing inflammation, being rendered rather less consistent, and in which a species of softening (*ramollissement mollities*) had or did exist, could not resist such a concussion; it was, therefore, ruptured, and immediate death ensued.

I must pause to remark, that I was unable to detect any hiccough (*singultus*) in this animal throughout the whole progress of the disease, although I believe that is considered to be a pathognomonical symptom of inflammation of the diaphragm in the human being; and many veterinary surgeons, as Waldinger and others, assert that it is always observable in the horse.



## A CASE OF TRAUMATIC EMPHYSEMA,

PRODUCED BY FRACTURE OF A RIB, WITH LACERATION  
OF THE PLEURA AND LUNG.—FATAL TERMINATION.

*By Mr. W. F. KARKEEK, V.S., Truro.*

ON the 13th of September, a grey mare, the property of William Daubuz, Esq., master of the F. B. Hunt, ridden by the whipper-in, in leaping a hedge, fell, and a piece of stick entered her chest, between the third and fourth rib, fracturing the third. The animal was immediately walked carefully home, the distance being between five and six miles. By the time she reached the stable, the whole cellular tissue of the surface of the body was infiltrated with air. It pervaded every part to an enormous and frightful extent, even to the eyelids, scrotum, and legs. The respiration was not much accelerated, nor did the animal appear to suffer much pain. She was immediately bled, until faintness was produced—a mild aperient given—the wound dressed, and a bandage applied. On the following day the pulse was considerably increased. Bleeding was again had recourse to, and some fever medicine given in the course of the day. Openings, also, were made with a lancet in different parts of the body, by which means the air was easily expelled, and with such force, that, at one time, a lighted candle that was held close to the orifice was nearly extinguished. This operation appeared to give the mare great relief; but still the pulse was quick and hard, and on the third day after the injury she was again bled. From this period the mare appeared to be gradually getting better. The emphysema was nearly gone, her appetite had partly returned, the pulse was ranging between 60 and 70, and the external wound had assumed a very healthy appearance. She continued in this state until the 20th instant, when a discharge of fœtid bloody matter was seen to issue from the nostrils. The discharge continued to increase, and on the 23d instant she died from suffocation, an immense quantity having burst out as it were instantaneously.

In this case death was produced in consequence of the organic lesions in the lungs, the presence of air in the cellular structure being of secondary importance; and I have been induced to place the case on record, to shew how easily emphysema can be relieved. On examination after death, the very rapid infiltration of air was partly accounted for. The mare must have suffered from some previous inflammatory attack of the lungs, as there was an adhesion, where the injury was sustained, between the surfaces of the pleura—thus establishing a continuity of tissue



between the surface of the lung and the thoracic parietes ; so that when the puncture was made, the air passed directly from the interior of the lung into the subcutaneous cellular tissue, without any effusion into the great serous cavities. And this also explains why the respiration was not much affected ; for when this takes place there is always a great difficulty of breathing.

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## CONTEMPORARY WRITERS.

[We subjoin the opinions of the Editors of some periodicals. We have not the pleasure of any personal acquaintance with these gentlemen ; but it is gratifying to know that the eyes of the public are upon us, and that they approve of the course we have adopted.

The first is from Mr. Taylor, of Whittington, Stoke Ferry ; and the others from the northern and southern metropolis. We return our warmest thanks.]

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Whittington, Stoke Ferry,  
Sept. 24, 1841.

Sir,—AN utter stranger to you, except as a reader of and occasional commentator (especially in the pages of the “ British Farmers’ Magazine”) on your useful and intelligent periodical, and being, moreover, entirely ignorant of the profession of which you are so able and indefatigable an organ and advocate, I ought to apologize to you for the liberty I am about to take in thus addressing you.

I am led to do so, chiefly with a view to express the entire approbation of a disinterested person of the principles by which you have been guided in the controversy between the friends and opponents of free discussion. As Editor of an important work like *THE VETERINARIAN*, I consider you have done yourself honour, and conferred a vast public benefit, by upholding, and in your own person enforcing, these principles ; and if others think as I do on this subject, be assured it will be of more service to the interests of your periodical than any advertisement you could draw up and circulate of its merits.

I have directed a Bury paper to be forwarded to you (which I hope will reach you on Wednesday next), wherein you will find an article fully corroborating these my private opinions. I was led to this, chiefly by the duty which seemed in a manner incumbent on me to express my sentiments on the subject, as it

is connected with the veterinary profession ; and, in the next place, to endeavour to expose that fear of publicity which appears to be making its way among a few veterinary practitioners, and into some of our farmers' clubs. I hope that in neither case I have over-stepped the bounds of moderation or propriety ; and I have only to add, that you are at liberty to make use of this communication in any way you may think most conducive to the great interests we both have in view, viz. those of science and practical utility.

I am, Sir, &c.

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THE VETERINARIAN *for September 1841.*

*London : Longman & Co.*

“THE progressive improvement, usefulness, and respectability of the veterinary art continue to be the objects steadily held in view by Mr. Youatt, the able Editor of this acknowledged organ of the science, and his assistants and numerous contributors. Cases and facts of great importance to the elucidation of this serviceable branch of medical practice are thickly spread through this number, and much valuable correspondence given bearing on the same subject, particularly a series of letters demonstrating the usefulness of free discussion on veterinary cases, as practised in this useful periodical, and denouncing a return to the old system of secrecy and exclusion. This enlightened view we are pleased to find our own Veterinary Professor, Mr. Dick, advocating and enforcing.”—*Caledonian Mercury*.

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THE VETERINARIAN *for September 1841.*

“THE character of this journal is fully borne out by the contents of the present number ; for although the articles are very unequal in merit, the majority of them are highly respectable. Some of them display considerable talent, and exhibit a knowledge of disease, and its scientific treatment, which cannot fail to elevate the profession of the veterinary surgeon in public estimation. The cases detailed by Professor Dick, of Edinburgh, and Mr. Carlisle, of Wigton, will, we think, fully justify us in the above opinion.

“On the subject of publishing cases in a popular form, we beg to refer to the letter of Mr. J. Kent, of Bristol, which embodies all we could wish to say on the subject, and in whose

views we fully coincide. The day is now fast approaching when the blacksmith and ignorant empiric will no longer be consulted in cases of disease.

“We regret to observe that the Veterinary Medical Association has passed a resolution to publish their proceedings in a form separate from *THE VETERINARIAN*, to which it should have clung as the ivy to the oak; for we consider it no unimportant advantage to a society like the above, consisting principally of noviciates, whose stay in the metropolis seldom exceeds two years, to have their proceedings reported in a well-established journal of extensive circulation. The members of the Association should recollect, that when the proceedings of bodies like theirs are kept comparatively secret, a door is opened to the publication of garbled statements, and to a system of favouritism alike destructive of all good feeling and manly independence.”

*The British Queen and Statesman.*

## ON THE PRESENT STATE OF THE VETERINARY PROFESSION.

*By Mr. S. BROWN, Melton Mowbray.*

As Mr. Sewell condescends to receive a yearly sum out of the Royal English Agricultural Society's funds, of course that gentleman identifies himself professionally as the servant of the society; and as most servants engage to perform certain services in consideration of the amount of wages which they receive, and the employers alike consider themselves fairly entitled to an equivalent for the amount of money which they pay, there is every probability to lead us to suppose that our worthy Professor, in writing his circular on the epidemic among neat cattle, was actuated by a desire to fulfil a part of his engagements with the Society, as well as to confer a direct benefit upon the agricultural interest. I will not impute motives of a sordid nature to the pathological lecturer at the Royal Veterinary College: yet, I think that, if he had properly reflected, he would not have involved the reputation of the profession, or have endangered its interest, by writing a systematic mode of treatment of a certain disease, which was to have been carried into practice by persons ignorant of medicine, very liable to be influenced by credulity and strange infatuation, who would misunderstand and misapply much of that which was directed to be done, and who would, in all probability, be serious losers by what they did.



He could scarcely have done this with the doubtful success of gaining popularity among the agriculturists, although by it he annihilated the veterinarian's practice in the epidemic that lately prevailed, and still prevails to such an alarming extent among neat cattle and other domesticated animals.

Veterinary popularity should not, however, be gained by attempting to teach our employers the practical principles of our art; for after that, nothing short of uniform success will satisfy their expectations or induce them duly to appreciate our scientific attainments.

If Professor Sewell had duly considered the difficulties with which the veterinarian has to contend, and the strong bias that still exists among some agriculturists in favour of the old system of farriery, and also the limited extent of veterinary knowledge in the rural districts, he might have felt assured that we have difficulties enough to surmount before we can obtain any thing like a tolerable share of practice, without his writing a circular detailing a mode of treatment of the late epidemic, which, in the opinion of the agriculturist, would altogether supersede the services of the veterinary surgeon.

He should likewise have considered whether the possession of such a list of recipes was not much more likely to *intoxicate the brain* than prove beneficial to the interest of the agriculturist, as it would lead many of the graziers to suppose that, as the circular came from Professor Sewell, it must necessarily contain all the requisite information for the treatment of the disease; and as they were capable of giving the *prescribed medicine* to their cattle, it would be useless for them to send for a veterinarian, for there could be no possibility of possessing more knowledge of the nature and treatment of the then prevailing epidemic than they had obtained; for most of us had been educated at the Royal Veterinary College, where Mr. Sewell was the principal teacher, and who doubtless inculcated on the students the same principles as those which he now taught the agriculturists.

Thus many farmers had their minds perverted by a foolish and cruel plausibility, which induced them to use, for the treatment of the epidemic, Professor Sewell's recipes to a degree of infatuation, rather than confide in the skill of those practitioners whose professional acquirements and integrity had previously been acknowledged to be of essential service.

This wholesale system of quackery, however, although written with a Professor's pen, was at length discovered to be mere delusion; and when once the public mind clearly perceives that it has been the creature of credulity, it turns in disgust from its delusive object, fully determined to gain wisdom from past expe-

rience, and steadily pursues a consistent course in search of truth and sound principles of economy.

If such a desirable mode of thinking should result, and become established through the fallaciousness of Professor Sewell's circular, it is possible that the agriculturist may discover that it is far more advantageous, and much more likely to promote agricultural improvement, if they devote their time to the consideration of other subjects than the uncertain treatment of an epidemic among neat cattle.

The acquirement of a knowledge of chemistry, and the nature and component parts of the different kinds of soil, might lead to much improvement in the process of manuring, either for the purpose of enriching the soil or destroying the different kinds of grubs, or the germination of seeds that produce a variety of noxious weeds, and which are often injurious to the growing crops: so that, if it should be discovered that the science of chemistry is available for agricultural purposes, it is possible that a much less expensive mode of cultivation may produce a considerably larger quantity of the different kinds of grain. The relative proportions of nutriment contained in a given bulk of succulent and esculent roots, and the endless variety of plants that constitute the herbage, are also subjects well worthy of much consideration, and amply repay the labour of research. Then the highly important subjects of breeding and rearing cattle, and a knowledge of the exterior conformation of domesticated animals, a proficiency in which subjects is so necessary to ensure any thing like tolerable success in feeding, would seem to require much observation and mental labour before any thing like perfection can be attained in agricultural pursuits.

Is not the system, too, of veterinary education worthy of much consideration by the body of agriculturists, as the present one affords no guarantee as to our competency to practise the art which we profess, and the lives of domesticated animals are involved in the degree of skill which we possess? Essential benefit would also be conferred, both upon the agricultural interest and the veterinary profession, if farmers and landed proprietors would join us in our efforts to procure an act of Parliament which should regulate the education of future veterinarians. An act for the better education of the veterinary surgeon would justly be viewed as an act for the protection of the lives of domesticated animals against empiricism. There are many practising the art whose scientific attainments would have been much more extensive if there had been a compulsory enactment to compel the students to reside a sufficient length of time at College for the purpose of allowing them opportunity to acquire a competent



knowledge of the fundamental principles of veterinary science before they could commence practice.

If, however, the agriculturists feel deeply impressed with the great importance of veterinary science, and view its applicability to the principles of agricultural economy and the cause of humanity, probably they will feel assured that, even the present system of veterinary education is not commensurate with all the wants and wishes of the members of the profession, or sufficiently extensive in its nature and application, to enable veterinarians to confer the same amount of benefit upon the agricultural interest as would result from a much more extensive cultivation of the fundamental principles of veterinary science, as it regards all domesticated animals.

As this appears to be the position of the veterinary profession, it probably may be deemed worthy of the consideration of the noblemen and gentlemen who constitute the Royal English Agricultural Society, and the general body of agriculturists; and if such should be the case, I beg leave to assure them that, in my humble opinion, they will not only be conferring much obligation on the veterinary profession, but obtain, in some measure, a guarantee for the competency of future veterinarians, if they will cause the enactment of a bill which shall not only regulate the course of veterinary instruction, but also compel the students to devote a sufficient length of time, either at the Royal Veterinary College, or any other school in the united kingdom, and then pass a board of efficient examiners before they should be allowed to practise.

As THE VETERINARIAN is the recognised organ of the profession, it must necessarily become the creature of circumstances connected with veterinary movements and politics, and the chronicle of the opinions and sentiments of the members of the profession, and which at this important juncture should be unreservedly given not only by your old and long-tried friends, but also by every member of the profession who possesses the slightest degree of love for his art, and understands the true principles upon which veterinary science either is or should be founded; namely, the conferring of the greatest benefit on the greatest number of our fellow-subjects, by saving the lives of our domesticated animals. This seems to be the grand object of veterinary science, and a noble one indeed. It is in strict accordance with the best feelings of our nature, humanity and benevolence.

The Association has an undoubted right to publish its transactions in any way that may be deemed best calculated to raise funds for the purpose of defraying the necessary disbursements, and promoting the progress of veterinary science; but I imagine



that there are few veterinarians, of some years standing in practice, who would have considered the essays and speeches of the veterinary students worth the yearly outlay, had it not been for the arduous efforts of yourself and Messrs. Spooner and Morton, and a few others; and had it not also been for the transactions having been published in junction with *THE VETERINARIAN*. Without these fortunate circumstances they would, probably, never have reached the public eye; or, instead of being in the enviable position of going down to posterity, they might have shared the same fate as those of the old Society—namely, that of being smothered within the walls of the Royal Veterinary College.

Yet, Sir, I have sometimes regretted that your zeal in our common cause should have so much influenced your better judgment, as to have induced you to entail that upon your Journal which both raised the price and reduced the circulation. Fortunately, the resolutions of the Council have removed the incumbrance; and this, I hope, will excite our dormant energies, and enable us once more to raise our old and favourite periodical to that state of public estimation and sale of number which it so well merits.

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#### REMARKS ON THE PRESENT STATE OF VETERINARY POLITICS.

*By Mr. C. DICKENS, V.S., Kimbolton.*

My dear Sir,—WHEN I inform you that I was placed upon the doctor's list at the time that your letter came to hand, I feel that you will deem it a sufficient excuse for my seeming neglect in not sooner replying to you: fearing, however, that my silence may be construed into a carelessness respecting the welfare of the veterinary profession, I venture a few lines.

I infer from your's, that there is a division in the camp, as to whether *THE VETERINARIAN* should be supported or not? I answer decidedly, YES! What practitioner would not (if he knows his calling) sooner attend the stud or stock of an employer who has paid some attention to the veterinary literature of the present day, than one who is either totally ignorant, or possessed only of the jargon of olden times?—for, like a hard-riding nobleman, now deceased, who declared that he never saw a horse shod but with fear, or charged a fence with equal nerve after having witnessed the minute dissection of the foot, so will

that man act who has paid some attention to the history, habits, and liabilities of our patients. The more knowledge he possesses of their complicated frame, the less likely will he be to tamper himself, or suffer his menial to do so, when any part of the machine is out of repair.

Each month do I welcome *THE VETERINARIAN* as an old friend, and am eager to peruse its contents—never unfolding its pages but with pleasure, or reading them without information; and, at times, I have, as a grateful return, ventured to throw my mite into the scale, and shall continue to do so as long as it is thought worthy of admission by you.

Through the pages of this work how pleasing is it to view the onward progress of those who paced the College stones in one's own day—those with whom we have had many a warm but good tempered debate, and to see that what was then theoretically advanced, now carried into good practice. Had it not been for *THE VETERINARIAN*, should we have ever heard of Pritchard on the Diseases of the Heart; or, Friend on some of the leading diseases of the Cow; or the Turners upon Open-joint, or One-side Nailing; or Simonds on Hernia; or Spooner upon Hock-joint Lameness, &c.? and, although last, not least, would the beautiful Lectures of a Youatt have ever been in print?—I fear not.

But, Sir, you would scorn me if while I thus speak of *THE VETERINARIAN*, and still fancy that it has had and retains some faults, I did not with equal freedom speak out. Then, Sir, for some months past have I painfully witnessed how its pages have been robbed of some of its best papers, not only by the leading agricultural and sporting works, but by the provincial press also, and, in many instances, without even acknowledging the source whence they obtained their plunder. Such, it may be said, is not the fault of the Editor, nor of the Contributors; but have they not had it a great deal in their power, do they not still have it in their power, to prevent this in future, by clothing their contributions in more scientific language? The leading journals of the medical profession are all so written. Can they not oftener remember that it is for the profession, not for the public, that they are writing? It is because they write so much in simple and unscientific language that many a man is to be found who will tamper with his favourite steed that would not for a moment think of doing so with a beloved parent or a fond child.

As for the Transactions of the Society, I have always thought that they would be better published separate, quarterly or half-yearly, and disseminated among its members, in the same manner as the journals of the agricultural and other societies; neither

do I imagine that THE VETERINARIAN will suffer, as some suppose, from their absence, for the merits of them will, no doubt, meet with and cause much animated paper discussion through your pages.

After the multiplicity of opinions, and numerous verdicts of guilty, that have been given upon the Circular of the English Agricultural Society, I will content myself with merely stating that they have been doubly injurious to the country practitioner; in the first place, by depriving him of many patients, but more in the annoyance of preventing him from being called in until after the eleventh hour, or, in short, just in time to painfully record the verdict of "killed by the advice and recommendation of the English Agricultural Society."

Had it not been, Sir, for the observations that fell from the lips of a nobleman standing so pre-eminent in the agricultural world—my Lord Spencer—at the late Council Dinner of that body, at Liverpool, in July, I would have added no more to this long letter; but his Lordship, speaking of the late epizootic, after taking credit to himself for first suggesting the circular that was finally manufactured by Mr. Sewell, says that no one was more competent to the task (you, Sir, if there, could have told him there were many equally so), goes on to state that they have received 600 answers to their queries, subsequently issued, but that they were of so complicated a nature that but little good could be derived from them. But, Sir, mark what follows:—his Lordship actually says, in the face of all the leading farmers of the country, that "if the Society has not done much good, it has prevented a great deal of harm or mischief, for *it has saved the farmer from the imposition of the horse and cow-doctor.*"

Now, Sir, if this is meant for us poor country veterinarians, I for one, with all due respect to his Lordship's exalted rank, repel the assertion with the greatest contempt. Let us ask his Lordship, out of the 600 circulars received, how many, not from veterinary men, are worthy of record?

Secondly, I would ask you, Sir—who, I have some reason to hope, at the present moment are occupied in reviewing all you have heard upon it with the intention of giving us something good—where from the complicated mass you will be able to extract much worth your notice, except from veterinary men?

Again, have not the already recorded papers of many veterinary surgeons proved that they were equally, or, in fact, far more happy in their treatment than the learned Professor?

I trust that I shall not be wanting in that due respect to the Professor to which his situation and his talents entitle him, yet I do not see any reason why he should be held up to the world



at the expense of his professional brethren. His Lordship, in the language of friend Morton, is not content with causing a professional suicide, but exults over our bodies, and defames us when dead.

As for "imposition," I, and I am sure the majority of the profession, could honestly assert that we never imposed upon a client, or sought more than an honest remuneration for services performed.

I may be told that his Lordship did not mean to include veterinary surgeons: if so, why did he not more carefully express himself? Why could he not, if he meant to censure the illegitimate only, pass in return some slight eulogium upon the legitimate?—for I must tell you, Sir, that in the provinces, although possessed of our diploma and all honorary certificates, the term "veterinarian," is too cracked-jaw a word for many of our employers, and we are compelled to be contented with the old-fashioned cognomen of horse-doctor. What was the impression upon his Lordship's audience? why—if they took his description of us to be accurate—that we are a set of impostors, and that the sooner they give us notice to quit their stables and yards the better.

For the sake, however, of us all, I will conclude with a hope that his hearers were more generous than the liberal Lord Spencer.

## THE VETERINARIAN, OCTOBER 1, 1841.

*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

OUR readers are probably, ere this, thoroughly tired of the subject that has so long occupied our pages; but, it is one that must be finally settled, for on it depends the future character of our Periodical, and, to a certain degree, the progress of our art, and its estimation with the public. Are we justified in monopolizing or concealing any thing that relates to the preservation of the health of our patients, or the cure of their diseases? Will our art be accelerated or retarded in its progress by the claim to exclusive knowledge or the affectation of mystery?

These are questions to which several of our contributors have given an unanswerable reply. The medical journals promulgate without reserve the opinions and practice of the human surgeon

Are the interests of human medicine injured thereby? are there any who complain? Rather, is not the human practitioner employed in certain cases, and with regard to certain diseases, just in proportion as the character and proper treatment of these maladies are generally understood? It is secrecy and exclusiveness that lay the foundation for suspicion, and cause the practitioner to be disliked and misunderstood.

The progress of science is slow but sure. The period has arrived when the husband and father no longer tamper with the diseases of those whom they love, but seek at once the advice and care of the medical man in whom they can place the greatest confidence, and of whose general knowledge and surgical skill they are assured. So will it, ere long, be with the veterinary surgeon to a considerable, and, sometimes, an almost equal extent. What is necessary to insure this, but the gradual march of public opinion and the knowledge of the talent and acquirements, and honourable conduct and humanity of him whom they employ? Will mystery lay a proper foundation for this? No! It must be by the candour and straightforwardness of the surgeon that the confidence of the employer will be won and retained. The affectation of any mystery will in a moment break the charm.

Are we, then, to unbosom ourselves to our employer with regard to every symptom and every change that occurs? Is he to be made acquainted with every drug that is employed and the meaning of every combination of medicaments? By no means. When he is convinced that we understand the case which is brought before us he will not require us to descend to all the minutiae of treatment, or, if he did, we could give a brief and honest account of it that would not fail to satisfy him without divulging every secret.

In conducting the present Periodical, our contributors and ourselves have generally endeavoured to give an account in as simple and straightforward a manner we could of the disease that was brought under our consideration, and of the mode of treatment, so far as general principles went. Perhaps we spoke of the character and intent of the remedial agents that were employed, but rarely of their combinations or their doses. In a few cases it is acknowledged that both we and our contributors have gone

farther than this, and have described, somewhat too much at length, the composition of our medical agents, and the particulars of treatment on which we placed the greatest confidence. From the volumes most and deservedly prized among us, to the contributors to our Journal, and the authors of some of the Essays, *this has been too common among us.*

We must do so no more. In conducting our periodical, we will, in future, be more on our guard, especially when, in many cases, our recipes have been unfairly purloined, and our most valuable weapons have been used to our serious injury. We will not so often speak of the composition of our medicines; but we will give a satisfactory account of their nature and intention, in order to guide the proficient, and to induce the reader to make farther inquiry. Still we will speak of our most valuable improvements, and give a satisfactory history of them; and at times plainly describe the character of the medicaments on which we place the chief reliance in the relief of the disease under consideration at the time.

The advice of Mr. Percivall is much to the purpose: "I should counsel the contributors to *THE VETERINARIAN* to give their pathological papers and their narrations of cases every attention in respect of history, causes, symptoms, post-mortem appearances, &c.; and when they come to the subject of treatment, merely to mention that it was such as is usual in such cases; or that it consisted in cathartics, anthelmintics, febrifuges, vesicatories, discutient or evaporating lotions, &c.; or should it be required to specify any particular medicine, that it be named according to the nomenclature of the pharmacopœia of the College of Physicians of London, Edinburgh, or Dublin, it being, in certain cases, when requisite, stated which authority is followed."

Thus far we yield to what we acknowledge to be a just demand; but our opposition to "the exclusive system," which some practitioners wished to establish, is as determined as ever.

And now, perhaps, we may be permitted to ask, Is our supposed injudicious advocacy or practice of the diffusion of veterinary knowledge the real cause of the obloquy which has lately been thrown on *THE VETERINARIAN*, and the virulence with which its Editor has been pursued? Was it on this account



that veterinary surgeons travelled from one town to another, attempting to persuade their brethren to forsake this faithless and useless periodical? Was it for this worthy cause—*proh pudor!*—that something like *lynch law* was spoken of, and threatened to be inflicted on the criminal? No! no!! The plain fact was this:—In an evil moment the Founder of the English Agricultural Society, lamenting the continued existence and rapid spread of the epidemic among cattle, obtained from Professor Sewell certain advice and instruction, by means of which the plague might be staid; and this was sent, not in the first instance to the practitioners of the veterinary art, but to the members of the Agricultural Society. These instructions were eagerly received and acted upon; and the result was, that, instead of the cessation of the plague, the number of those that perished was increased, and the condition of those who remained considerably diminished; while the veterinary surgeon had lost a great part of his practice—had been forsaken by many of his former employers—and it had become evident that, on account of the coolness that had sprung up between them, many a year would pass before he and they would again be cordially united.

Some persons now thought necessary to seek protection against the storm that threatened, or to find some individual against which its fury might be directed. That victim was the Editor of *THE VETERINARIAN*. Many a calumny was heaped upon him, but principally because he was connected with the new light respecting the diseases of cattle that had broken on the farmer, and likewise because he was connected, or supposed to be so, with the knowledge of certain circumstances that had taken place at the Veterinary College.

What success will ultimately attend these demonstrations remains to be seen. The Editor is at his post, and there he will remain until a hint from those whom he most values induces him to retire; and then, he has the happiness to say, the Periodical will be transferred to a more efficient man,—him from whom it derived its origin. With a warmth of friendship that the Editor will never forget, the father of *THE VETERINARIAN* has offered once more to unite in the care of the bantling; and the Periodical

will, after Christmas, be again conducted in the names of Percivall and Youatt.

Whatever may have been the defects or errors of this Periodical during the last twelve years, the profession has now the fullest assurance that it will be honourably and efficiently conducted. For any errors into which the former Editor may have fallen he is sorry—any offence that he may have given, he regrets: it was not intended. His enemies,—if on just and deep consideration there are those who have been or may be disposed to assume that character—he harbours against them no ill-will; and it will rest with them to determine the course of conduct which it will be necessary for him to pursue.

There is one unpleasant subject to which the Editor feels himself compelled to allude—the speech of Earl Spencer at the agricultural meeting at Liverpool, as related by Mr. Dickens, and confirmed by the reporters at that meeting. His lordship is represented as having said, that “when the epidemic which had spread among cattle first became general, he thought the Society ought to circulate among the farmers a paper which would teach them how to treat it. They applied to some of the most eminent persons in the country, and, having obtained their opinions, a paper on the subject had been circulated, and it had been attended with the best possible effect. He then thought from the great number of cattle attacked, that by receiving reports from different parts, of the way in which the disease had affected cattle, some conclusion might be come to as to the mode of treating it. They had heard the report read, which had been founded on the communications received from the most competent men in the kingdom to give their opinions on the subject. These papers had been placed in the hands of Mr. Sewell, than whom no man in the kingdom was more capable of giving an opinion on the subject; but from the contradictory and conflicting statements that had been made, the Society had not been able to effect any great good; but although the Society had not been able to accomplish any great good, it had prevented many of the farmers from trusting to the quackery of horse and cow-doctors, who did so much mischief to the farmer.”

There are three important points which here force themselves upon our attention. First, there is the frank acknowledgment of the noble lord, that he was the original proposer of the strange circular to which we have alluded—a document that, taken in all its bearings, has not its parallel in the history of medicine—equally destructive to the interests of the farmer and the veterinary surgeon, and which has done mischief in the temporary but sad loss of condition in cattle, in the destruction of thousands of them, and in the alienation of those whose interest is the same, and who should never be disunited.

Next is the acknowledgment, with regard to the circular at least, but extending by implication to the whole proceedings of the Society on this matter, that the Council had been unable to accomplish any good.

Lastly comes—to the veterinary surgeon, the most fatal blow of all—the exultation with regard to one effect produced by the circular, the withdrawal of the confidence of the farmer from “the quackery of horse and cow-doctors.” His lordship will say that he had no reference to the veterinary surgeon. He should have plainly stated this. The terms used by him are adopted in every part of the kingdom as descriptive of those “good or bad,” ignorant or properly taught, who are connected with the medical treatment of cattle. He, perhaps, meant no insult: we can imagine the peculiar and honest laugh with which these words were accompanied—we know the kind heart of him who uttered them; but, spoken without one word of explanation, without any distinction being drawn between the worthy and the unworthy, they are calculated to do lasting if not irreparable mischief to the veterinary profession.

*We indignantly enter our protest against the adoption of such language in such a connexion and in such circumstances. We see plainly enough the effect that will be produced by it, far and wide; yet we say to our brethren, Do not be seduced to adopt any line of conduct injurious to the agricultural interests and your own. Fearlessly shew yourselves at the meetings of this society. Take an honourable but decided part in its proceedings, and your honest worth and value will, ere long, be fully recognized.*



## REVIEW.

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Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

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## THE NATURALIST'S LIBRARY, VOL. XII.

*The Natural History of Horses—The Equidæ, or Genus Equus of Authors. By Lieut. Col. CHARLES HAMILTON SMITH, K.H. and K.W., F.R. and L.S., President of the Devon and Cornwall Natural History Society, &c. &c.*

THE historians of days of yore were very indifferent naturalists, since very little is known of the early history of the horse, connected with the early progress of mankind—such as the sources whence they first obtained the animals, and subsequently subjugated them. It is highly probable that they were not subdued to the purposes of man at a very early period of the world; for, from the best accounts that can be obtained of the early progress of human population, it is probable that the *hunter state* was the second stage to which mankind arrived; and it is not reasonable to suppose that the horse was subdued until this epoch, since they must have made some progress in the arts ere they could have attempted to have mastered the desert-born courser. In the earlier stages of society, the necessity of hunting acted as a principle of repulsion, causing men to spread with the greatest rapidity over a country, until the whole became covered with scattered settlements; and this will partly account for the circumstance of horses being discovered in every part of the old world at a very early period.

The author of the volume before us is of opinion that the “primitive habitat” of the horse, as well as his first domestication, was central Asia; and he comes to this conclusion by a critical dissertation on the names bestowed on these animals in the most ancient languages.

As to the primitive habitat of the horse being discovered by such means, it is altogether out of the question. The author himself clearly proves, in the discussion on the fossil remains of the equidæ, that they have been found over an immense surface of the old world, from Eastern Tartary to the west of Iceland—from the polar regions to the south of the Himalaya mountains, and to an unknown distance in Africa, in company with the fossil relicts of mastodons, rhinoceroses, tigers, elephants,

&c., and, he might have added, on the continents of North and South America. In South America, the bones of horses of a large size were discovered by Mr. Charles Darwin, naturalist to the "Beagle," in company with the remains of the megatherium, of immense bulk, and a huge mastodon, also parts of rodents, and a llama fully as large as the camel. Dr. Buckland discovered an astragalus, metacarpus, and metatarsus of the horse, in company with the remains of the elephas, primogenus, and of the fossil ox, that were brought home by Captain Beechy from the west coast of North America.

To attempt, then, to prove the primitive seat of the first pair of horses by reference to the birth-place of man, would be quite unphilosophical, when it can be shewn that his introduction was of a far more recent period; that, in fact, they occupied the earth's surface for many thousands of years ere man ever placed his foot on the wondrous soil, or contended with them for dominion.

Col. Hamilton Smith does not appear to be aware of the fact, so plainly and distinctly stated by Darwin, that thousands of fossil bones of the horse have been found in the pampas of South America, that it is, in fact, the great sepulchre of their remains. And here he meets with the same difficulty in satisfactorily explaining the death of the now fossil horse, while his contemporary congeners were left behind and are now found inhabiting the same plains, as he had in persuading himself that the destruction of the mastodon, elephant, &c., during the post-tertiary period in England, was the effect of the simple and general laws of nature; while their contemporaries, such as the horse, ox, and deer, the progenitors of the present existing races, are still found inhabiting its surface. It is a well known fact, beyond all question of dispute, that, when Columbus first visited the American shores, there was not a single animal found there having any reference to those in the old world; and yet, in but a very few years afterwards, its plains were overrun with thousands and tens of thousands of horses, the successors of the stock introduced by the Spanish colonist.

Without entering farther into the question, we may safely conclude that certain races of living beings, suitable to peculiar conditions of the earth, have been created; and when those types became no longer favourable to the continuance of such forms or organization, according to the natural laws by which the conditions of their races were determined, they disappeared, and were succeeded by new forms.

Hence, at the period when the plains of our native country were occupied with elephants, mastodons, and horses, its rivers

and marshes with the hippopotami, tapirs, and rhinoceroses, and its forests with hyænas, bears, and tigers, the climate must have been a tropical one; and as it gradually changed and became more temperate, those races that are only found at the present time inhabitants of hot countries died gradually away, whilst the horse, the ox, and deer, that are denizens of almost every country, were left behind as the proprietors of the soil. We have every reason to believe that gradual changes of a similar kind, either from cold to heat (perhaps to the most intense heat), or heat to cold, occasioned the destruction of the horse in South America, at the period to which we allude.

We have quite sufficient proof of those alterations of temperature in Great Britain, particularly in Scotland, where there have been discovered beds of arctic shells; and, subsequently, the same spot must have been exposed to the most intense cold, which froze up the whole country, and covered the northern parts of Britain with snows and glaciers.

Col. Smith imagines that there is some difficulty in explaining the manner in which the bones of the fossil horse, and other reliquæ diluvianæ, found their way into so many different places. "In no case," he says, "are these animals suspected to have been transported by human intervention; and yet they are located in some places, where, without the aid of man, they cannot have migrated, unless we admit of changes on the surface of the earth since the present zoology was in being of such magnitude as to include the formation of the Mediterranean—the separation of the British islands from the continent of Europe—of the Indian islands from that of Asia—and the formation of a channel to cut America from connexion with the old world."

Is any one acquainted with the first rudiments of geology—there will be no great stretch of fancy required to believe that much greater changes have taken place on our planet than even these, which constitute the author's dilemma; since, both in organic and inorganic nature, changes such as these have been proved to have taken place, supported by proofs so incontrovertible, and traced in language so intelligible, as to constitute a body of evidence with which no human testimony can compete. It is true that the time required for the succession of events which we have been describing must have extended over an immense period of time: but time and change are great only in relation to the beings that note them; and every step we take in geology shews the folly and presumption of attempting to measure the operations of nature by our own brief span. Reflecting on these phenomena, the mind recalls the impressive exclamation of the poet:—



My heart is awed within me, when I think  
 Of the great miracle which still goes on  
 In silence round me. The perpetual work  
 Of Thy creation finished, yet renewed  
 For ever!

But we pass on to the domestication of the horse; and here it is probable that the author's philological researches have been of some service in determining in what country he was first subdued; and this, according to his opinion, was achieved in central Asia, about the fortieth degree of latitude, from whence riding and charioteer nomads have incessantly issued, penetrating to the east, the south, and the west, from periods evidently anterior to historical record, almost to our own times. "The natives of high Asia," he says, "were inventors of the bridle, of the true saddle, of the stirrup, and probably of the horseshoe. With many of them, a horse, a mare, and a colt, were fixed at a nominal standard of value; such was once the case among the Celtæ. "The whole people are mounted," continues he, "and do nearly all their domestic work in the saddle; they cross rivers by holding their horses' tails, or, fastening them to rafts or boats, convey themselves to the opposite shores, sometimes several miles distant. Of all the races of man, they alone eat their flesh, drink the milk of mares, and know how to convert it into *curmé* (an intoxicating beverage). They marry on horseback; their councils meet on horseback; and declarations of war, treaties of peace or alliance, are dated from the stirrup of the sovereign."

Mr. Youatt, in his "History of the Horse," has maintained that the Egyptians were the first people who tamed the desert horse; and the author of the volume before us, evidently with an intention of disproving it, enters into a long critical research concerning the names bestowed upon animals of this family in the most ancient known languages: "in the Hebrew, for instance, the word *pra*, *para*, *pered*, *perdah*, meant either an ass, mule, or, more properly, a riding beast; and comparing them with *paras*, horses, and *Parassim*, Persians, later Parthians—that is, horsemen—we see," he says, "that the root has a more eastern origin, and belongs to a people coming from the regions of Hendukoh, whose name was derived from the quality of riding or charioteering; in a secondary sense, an exalted people, and was connected with a dialect, if not Sanscrit, at least Zend or Pelheri, not remote from Mæso-Gothic and Teutonic, where *pherd*, *perd*, *paert*, are dialectical variations of the same origin, and even the Latin *ferro* is not an alien. We may therefore," he says, "suspect that *pra*, *para*, &c., in common with many other Indo-Sacian, Germanic, or Scythic words, abounding in the Arabic and other

Semetic languages, were imported by the first equestrian colonies that invaded Syria and Egypt. We find it, in a remoter sense, in the name of *phre*, the title of the sun, the charioteer, and the image of beauty; as it is again in the west, where the Scandinavian *freya* and *fray* denote beauty and pre-eminence. These inferences are further supported by the Babylonian name, *ninus*, *ninnus*, *hinnus*; through the Greek *νιννον*, from an Asiatic root, always denoting a young equine animal; and the old Persian name, *pful*, a beam of the sun, a horse, a foal, consecrated to the sun; and the later *asp*, both epithets and names of a whole series of kings and princes. Surely," he continues," these inferences are more admissible than to take *phar* or *phra* from the forced root *fugit*. With regard to the oldest Sanscrit names of the horse, it is true we find none directly sounding like *pra* or *perd*; they are *aswa* and *turanga*, with several other epithets: the first of these, no doubt, parent of the Persian *asp*, and the latter of *Turan*, the land of the swift, an ancient appellation of Bokhara, or the Valley of the Jaxartes—that river which in Hindu mythology is always represented issuing out of a horse's mouth, and therefore another indication of the quarter whence horses became known to Southern Asia. Now, referring to *atun*, we may believe it to be another mutation, like *asp*, from *aswa*, or along with *aswa*, from a root still older, and to be likewise in connexion with *ἵππος* and *equus*, which are claimed to be Pelasgian modifications; and that the Finnic *epo* and *upping*, an ancient Anglo-Saxon and Frisic term, is similarly related to *ἵππος*. All these names are expressive of qualities, and their roots may be fairly traced. A similar slight mutation places the Hebrew *ramach*, and the Celto-Scythic *march*, a horse, a mare, in the same affinity; and if we take one more name *sus* or *sush*—in *Turkish* still *sukh*—the most ancient term for that animal known in the south-west of Asia, and the origin of *Susiana* and *Suse*, whither the earliest Caucasian invaders appear to have come to settle with their horses in the pastures along the river Choaspes. We have also an indication of colour. For *sush*, a mutation of *sur*, the inversion of *rhus*, applies to bay, the general livery of horses. A name in the west slightly varied to *rhos*, or *hros*, and *horse*, belongs to both the animal and the colour; while the word *bay*, in Latin *badius*, and in old Teutonic *bayert*, may be imported from Arabia, where *beyal* denotes the same animal, or is again a coincidence between the Arabic, the old Pelasgian, and the Teutonic.

"Thus we may infer," continues the author, "the original horse of south-western Asia came already domesticated from the north-east; and therefore we find no mention of it made till the Patriarch Joseph, holding the highest ministerial power in Egypt,

sends a chariot drawn by horses to bring his aged father to the banks of the Nile ; for he resided at Zoan, on the borders of Goshen, or at On (the Greek Heliopolis), where the sun was honoured under the titles of *phre* and *phar*. He was in the region where the grazier *Hyksos*, invaders and charioteers from high Asia, had until lately resided."

The arrival of the Centaurs, too, the author considers to bear out his opinions ; for the very fact of their presence, their superior attainments, and the character of their horses, prove that there was a great deal of truth, after all, wrought up in their poetical history. "The irruption," he says, "belongs to the earliest movement of the cavalry hordes from central Asia, coming upon Thrace and Thessaly by the north of the Black Sea, and across the lower Danube ; while another, not long after, evidently composed of a more southern tribe, broke into Asia Minor, and was known in tradition by the appellation of Amazons. The first, most likely, were Northern-Scythians of High Asia, real horsemen ; the second, highland Sacæ, Stri-rajas, perhaps Pandu followers of Crishna and Ballirama, led by martial queens, wearing long clothes, and detached westward from a cause unknown, but both more civilized than the Pelasgians of either side of the Ægean : the first exclusively riders, the second both riders and charioteers, with institutions akin to those of Indian nations."

The author then attempts to prove that both these events synchronize with the heroic age of Greece, and are sufficiently near the periods of the expulsion of the shepherds, the invasion of Asia by Sesostris, or Remes II and III, and the Indian epic legends, to establish the epoch of great movements through all the regions in question, and fix the period when horse, chariot, and rider first make their appearance ; the northern nations exclusively as riders ; at Nineveh, in Asia Minor, and in India, as charioteers and riders ; and in Greece, Palestine, and Egypt, as charioteers only.

"Comparing, then, these considerations with the claims in favour of *Africa*, set up by late writers, who consider the domestic horse was first brought from thence to be subdued in Egypt, we find," says the author, "no true indigenous wild horse in that quarter of the globe, unless the puny *koomrah* deserve this name ; and we appeal to the current of human civilization, which most certainly did not set in from central Africa towards the north east. Although Numidian horsemen occur, they are not charioteers, nor noticed until Carthage and Greek Cyrenaica flourished, or had already lost their independence ; and then they were naked riders, little acquainted with the bridle or the saddle,



and with less adaptation of the arts of Asia than the modern Patagonians have copied from those of Europe.

“Egypt was not a wild country for wild horses : we have already seen when the domestic horse first appears there ; and surely it was not in Nubia that the elements of progressive civilization were taken, but from Asia, whence the people came, and to which alone they acknowledged affinity.”

It is my intention, in the following month, again to refer to this highly interesting volume : there is much valuable matter contained in it—useful alike to the philosopher, the warrior, the sportsman, and the veterinarian. K.

*Illustrations of the Breeds of the Domestic Animals of the British Islands, consisting of a Series of coloured lithographic Prints of THE HORSE, THE OX, THE SHEEP, THE GOAT, AND THE HOG. By DAVID LOW, Esq., F.R.S.E., &c. Parts 8, 9, and 10.*

The EIGHTH number commences with the Polled Suffolk Breed, better known by the name of the Suffolk Dun, from the once prevailing colour of the breed. They are bred in Suffolk, Norfolk, Cambridge, and part of Essex, and, when fattened, are known in Smithfield market by the name of “home-breds.” They have no connexion with the Galloways, another polled breed, and with which they are sometimes confounded, but from whom they essentially differ in the thinness of the neck and shoulder, the smaller depth of the ribs, and therefore their less value for fattening. On the other hand, however, they have the faculty of yielding a far greater quantity than the Galloways, in proportion to their size and the meat which they consume. They are found in the greatest purity and numbers in the middle divisions of Suffolk. They are larger and coarser about Ipswich, and towards the coast ; and in Cambridgeshire and Essex they have evidently degenerated. The grand principle with the farmer is the yielding an abundant quantity of milk, and of that quality which suits better the manufacture of butter than of cheese. The mixed purposes of the dairyman and the grazier have been neglected, or rather they have never been fairly answered. Even the Ayrshires, when brought to Suffolk, have failed.

The next plate contains the Devon Bull. His native country is the northern slope of Devonshire, extending from Barnstaple, eastward, beyond the Exe. We could have wished that it had been the true Devon that had been here depicted, for having, many a time and oft, seen him in his native country, we

have always fancied that there has been a little deterioration when he has been far removed, or attempted to be bred elsewhere. Still this is a beautiful portrait, and embodies much of the improvement that has been effected in the breed. The shortening of the neck, and the enlargement of the chest, and of the carcass generally, and the diminution of the length of the limbs, are well depicted. It is a beautiful breed ; but there are others that arrive at greater weight, and attain an earlier maturity.

The next plate contains the portraits of two of the Sussex breed, the natives of the weald of Sussex. There is a considerable resemblance to the Devon breed, but the Sussex oxen are taller and larger, and carry a heavier carcass. They occupy an intermediate station between the Devon and the Hereford cattle. The Sussex breeders are beginning to be more aware of the sterling value of their cattle, and anxious to improve them.

The following plate contains a pleasing specimen of the Glamorgan breed. It differs in different parts of the county. In the upper districts the cattle are somewhat small and coarse, and slow in arriving at maturity. In the vales there is a superior breed, and the cows are excellent milkers. The introduction of the short horns, however, into the Vale of Glamorgan has considerably lessened the value of the native breed.

The NINTH part of this work is devoted to Sheep; and the first plate contains a sketch of the Ryeland sheep, so called from its being principally cultivated in a part of Hereford on the south of the Wye, and formerly devoted to the production of rye. They were a small hornless breed, with the whole of the wool white, and possessing the felting property to an extent that was not exceeded by any breed in the country. The foreign finer wools being introduced, and this sheep being of small size, and inferior in general value to many breeds that the country is capable of maintaining, the Ryelands have lessened in number, and are not cultivated to the extent that they used to be. The plate of them, however, contained in this number, gives us a pleasing view of what they once were.

The next plates contain portraits of a ram, and a ewe and lamb, from the breeds of Messrs. John Ellman, of Glynde, in Sussex, and Thomas Ellman, of Bedingham, in the same county. They are, indeed, beautifully executed. A pleasing history of this valuable breed is given, from the first attempts at improvement by John Ellman, of Glynde, to the present state of early maturity and fattening power which they have reached. The change which has taken place in the wool of the Sussex sheep is not, perhaps, sufficiently adverted to; it is, however, a curious and a very important fact. A detailed account of it will be found in the treatise on "SHEEP," by the writer of this review.



Mr. Low appends a sketch of the present state of British wool, and the woollen trade generally; but perhaps he has not done full justice to those who have preceded him in this path.

An engraving of the OLD LINCOLN SHEEP concludes the ninth number. This breed has almost passed away, or is rarely to be found of unmixed blood. This animal, however, has been selected from a flock that has been maintained perfectly pure, from a period previous to that in which the Dishley blood was introduced. Some of these sheep arrive at the strange weight of fifty or sixty pounds per quarter. The wool also is peculiar for its toughness and length of fibre, and yet its peculiar softness.

The TENTH part commences with the early history of "the Horse," the first domestication and early use of which he traces to the great centre of the human family in Europe. On this subject, however, we will not at present enter. Colonel Charles Hamilton Smith has lately published a very interesting work on the history of the horse. Mr. Karkeek has commenced, in the present number of THE VETERINARIAN, a lengthened review of this publication, and, ere many months have passed, the author of this review must be again in the field on the same subject. We must, therefore, content ourselves with a very slight mention of the plates which this part contains.

The first is the old English black horse, occupying the rich fens of Lincoln and Cambridge, and extending westward, through the counties of Huntingdon, Northampton, Leicester, Nottingham, Derby, Warwick, and Stafford, to the Severn. His colour is usually of a sooty black, with frequently a white lozenge-shaped mark on the forehead, and usually one or more of the feet or legs white. His body is massive, compact, and round; his limbs stout; his chest broad; and his neck and back short; his mane thick; and his legs hairy, down to the heels—his whole aspect conveying the idea of great physical power, without corresponding action or spirit. The largest and finest of these horses are in great demand for the brewer's dray, or the waggons of the coal-merchant.

The Professor next turns to the Cleveland Bay, bred in Yorkshire, Durham, Northumberland, and even beyond the Tweed. They present every diversity of size, colour, and breeding. Some portion of the blood of the race-horse is diffused among them, according to the use for which they are destined; and this is effected on scientific principles. The district of Cleveland owes the production of its beautiful race of horses to the possession of a distinct and definite breed, formed not by accidental mixture, but by continued cultivation. It is the scientific combination of action with strength, yet with that form and those qualities which are peculiarly essential to the carriage horse.



The next plate is that of the Suffolk Punch of the present day. The largeness of the head, the shortness of the neck, the coarseness of the muzzle, and the lowness and cloddiness of the shoulders of the old Punch, are not so prominent as they used to be: in fact, the breed has been crossed by the larger horses of Yorkshire and Durham, and, perhaps, has improved in figure and action.

The last plate of this part contains the 16-hand Clydesdale, and the diminutive Zetlander. The contrast is a pleasing one. The Clydesdale horse is the inhabitant of Lanark, Renfrew, Ayr, and Dumfries—black, bay, or brown; longer and less weighty, compact and muscular, than the English black horse. He usually steps out more freely, and has more useful action for ordinary labour. He draws steadily, and is free from vice.

With this part ten closes. The work, and particularly the pictorial part of it, decidedly improves as it proceeds; and that is no mean praise. Y.

*Manual of Veterinary Homœopathy, comprehending the Treatment of the Diseases of Domestic Animals. From the German of M. W. London: Hurst and Bailliere.*

When the question of homœopathy was first agitated at some of the meetings of the medical societies of the metropolis, the Editor of THE VETERINARIAN was, for awhile, silent, wondering with great amazement at the strange doctrines that were promulgated by some of those whom he had been accustomed to place almost at the head of their profession. He could not, for a moment, doubt the honour of the propounders of these new and astounding doctrines. He sometimes met with isolated facts that seemed to confirm the wildest of their errors; but he never, for a moment, became a convert to them. At length some of the experiments were tried on the quadruped. He takes shame to himself that he did not assume the initiative here.

These experiments were, in the opinion of the homœopathist, conclusive. He doubted the accuracy of some of the accounts that were given, and at length he began to experiment himself; and the result of these experiments was far from being satisfactory. He published, in THE VETERINARIAN of some years ago, the result of these experiments. He lost the support of more than one by whom he used to be employed, because he would see with his own eyes, and form his own conclusions from the facts that were presented to his consideration.

The experiments, however, were continued; and he has now

before him a volume containing rather more than 300 pages, in which it is stated that, "incontestible success has for a lengthened period attended the application of homœopathic principles to veterinary medicine; and a reply is given, in a very peremptory manner, to those sceptics of homœopathy who deny that cures are obtained by its practice." It is, indeed, affirmed that the author has cured nearly 300 of the most frequent diseases in domestic animals with facility and promptness. As this is the first time that our profession has been thus challenged, the readers of this Journal will forgive our entering into the subject at some considerable length.

Dr. Sigmond, in his invaluable lectures on the materia medica and therapeutics, gives a very interesting account of Hahneman, the founder of homœopathy. We insert an abstract of it.

Hahneman was born in the year 1755, at Meisson, in Saxony, and from his early youth was distinguished for his industry, and his facility in acquiring information. In the year 1775 he went to the University of Leipsic, the whole sum contained in his purse amounting to only twenty ducats. With a praiseworthy industry, he increased his humble resources by translating the most esteemed of our English medical works. To this occupation he owed his acquaintance with medical science, and that love of inquiry for which he was so justly distinguished.

From Leipsic he proceeded to Vienna, where he gained the good opinion of Professor Quarin; but the expenses of a capital were too great for his limited finances, and he was on the point of abandoning his profession, when he was introduced to the Governor of Transylvania, to whom he became librarian and physician. With him he remained until he had accumulated a sum sufficient to enable him to take his degree at Erlangen. He then devoted himself to the study of chemistry, and to translations for the German periodicals, from the English, French, and Italian journals; after which, he undertook the translation of Cullen's *Materia Medica* into the German language.

When employed about this, he was struck with the decided febrifugal power of *quina*, and found himself unable satisfactorily to account for it, while he was quite dissatisfied with the explanations of others. His devotion to philosophical inquiry induced him to institute various experiments on himself, in order to solve the difficulty. He found, or thought that he found, that bark, when he was in a state of health, produced, to a certain degree, a state of intermittent fever, analagous to that for which this drug was administered as a specific remedy. It produced the identical fever of ague, but in a less and, sometimes, almost inappreciable degree. "In fact, that which produced a deviation



from the normal state was, from its possession of some innate connexion, the very cause of restoring the organs and tissues to their healthy condition."

That which Hahneman discovered, with regard to bark, existed, according to him, in every therapeutic agent; and, with much laudable zeal, he thought that he would put this fairly to the test. In fact, he subjected himself to privations of every kind, and to sufferings of every degree, in his experiments, not only on simple medicines, but on the most virulent poisons. There was, however, one error, which existed from the very commencement of his labours, and which soon constituted the peculiar feature of his philosophy and his practice. He cared little about the seat or the cause of disease, but his whole attention was directed to the symptoms; and in consequence of this, instead of applying remedies to the malady, he sought for a medicine which bore some analogy to the prominent appearances that presented themselves; and that he administered, and on that alone he depended.

In the pursuance of this plan, he soon began to find that the effect of his new medicine, united with the previous diseased action, sometimes acquired a most formidable degree of power, and the patient was in danger of being hurried off before his time. Then came a new inquiry,—in how minute a dose might the artificial agent be exhibited, so as to produce the desired effect. He first had recourse to doses somewhat smaller in quantity than those which he was accustomed to exhibit. Still the effect was too powerful; and the dose was farther diminished, until it was carried to a degree of minuteness of which he had no previous conception, and the power of which is a matter of doubt and ridicule to all but his immediate followers. He began the diminution by portions of grains or minims. He dissolved a grain or a drop of the therapeutic on which he was experimenting in ninety-nine parts of alcohol. Then, every drop of this mixture contained  $\frac{1}{100}$ th part of a grain of the original drug. One of *these* drops being mingled with 100 of alcohol, the division was carried on to the  $\frac{1}{10000}$ th part of a drop; and this was often increased, according to the nature of the case or the whim of the medical man, until the minuteness of the quantity of the agent could scarcely be expressed by figures. It was often carried to the thirtieth dilution: still it was supposed to be sufficiently potent to combat and to conquer many diseases.

Pulverizable medicines are prepared as readily as the fluids, being mingled with minute globules of sugar and starch; and in this form the attenuation is carried on to the millionth part of a grain. They are said to retain their efficacy eighteen or twenty



years. If a greater attenuation is supposed to be required, the powders are dissolved in a mixture of alcohol and water.

Such is a rapid outline of the homœopathic practice. In a former volume we referred to it, because it was said to have been tried, and with great success, on our patients, and particularly in cases of rabies. We confess that we might not then have done justice to the subject. We may have treated it somewhat too lightly; but now that a volume is published of its successful application to “the treatment of the diseases of domestic animals,” it demands serious consideration, *and it shall have it*. When we are told that it has cured nearly 300 of the most frequent diseases of our quadruped slaves with facility and promptness, it comes home to our business and bosoms.

We must, however, confess at the outset, we perfectly agree with Dr. Sigmond that “the practice which Hahnemann inculcates is totally at variance with that which experience, observation, and reasoning, have from the earliest period taught us,” and, on the whole,

“Some truth there is, but dash’d and brew’d with lies,  
To please the fools, and puzzle all the wise.”

We meet with another impediment at the very threshold of our inquiry. We observe with mingled surprise, disappointment, and indignation, that the author of the present volume, he who professes to be able to render such essential service to the agriculturist—he to whom, if he effects but a small part of that which he promises, a statue ought to be erected in every country—refrains to sanction with his name a work of such importance. We now, in the name of the veterinary surgeons and agriculturists of Great Britain, and of Europe, call upon the author of this work to give us some better assurance of who or what he is, than the short and mysterious introduction of, “From the German of M. W\*\*\*” will afford. There shall be no foul play; but we have a right to know with whom we are about to contend. Still, however, we will be at our post at the beginning of the next month.

Y.

## THE TREATMENT OF PHRENITIS, OR INFLAMMATION OF THE BRAIN IN SWINE.

*By Mr. CUPISS, Diss, Norfolk.*

A STORE pig of mine, weighing about five stones, which had been living on the usual kitchen refuse, and a little stale milk, was first noticed, on Wednesday morning last, to be walking round its yard apparently much discontented and thin, and

anxious to get away; it also refused its food. Not thinking the case of particular importance, I paid no farther attention to the circumstance until after my man had been to attend it in the evening, who found the animal much convulsed. When I saw it the convulsions were over, but the pig was blind.

Having paid but little attention to this branch of the veterinary art, I called in the assistance of an individual who was considered by many of his neighbours as "very learned" in the treatment of pigs. In conformity with his wishes, two inches were abstracted from the pig's tail, both its ears slit, and the parts left bleeding. On the following morning, as the animal was not better, it was bled in the mouth. This (the usual treatment in all such cases) being of no essential service, and the animal getting worse, I thought it necessary to take the case into my own hands. The convulsions, blindness, and prostration of strength, I considered to be owing to an affection of the brain, which symptoms were aggravated by considerable constipation of the bowels. The case had evidently been delayed too long, and the treatment I pursued was more of an experimental kind than with any hope of producing a favourable result.

The common means for evacuating the bowels not having succeeded, I gave some croton oil with tincture of ginger, which brought away some fæces very much hardened, and the animal appeared relieved, the convulsions being less frequent and not so violent.

A second dose, nine hours afterwards, caused a relaxed state of the bowels on the following morning. Thinking them not yet sufficiently operated upon, some sulphur was given. With all the attention which it received, the animal did not live long after taking the sulphur. The system evidently had been too much exhausted before active treatment was resorted to.

On examination after death, the brain shewed extensive marks of active inflammation. The observations that I made on the case and on the effects of the treatment would in a similar event, and in an early stage, induce me to pursue the following course: I would bleed largely from a vein in the fore leg (the brachial, or, as known to farriers, in the horse by the name of the plate vein). This vein runs along the inner side of the fore leg immediately under the skin; and the best place for opening it is about one inch above the knee, and scarcely half an inch backwards from the bone (the radius). No danger needs to be apprehended from cutting two or three times, if not successful at first in getting blood. By tying firmly around the leg just below the shoulder a ligature of tape, the vein will be more readily dis-

cerned, and the flow of blood greater. The palate veins, which run on both sides of the roof of the mouth, should also be opened, by making two incisions, one on each side of the palate, about half way between the centre of the roof of the mouth and the teeth.

The head should be kept cold by tying round it a piece of cloth, and frequently wetting it.

Should this treatment not prove sufficiently effective, although the bowels might be opened I would attempt blistering on the back of the neck, and would give internally powdered hellebore\* in two-grain doses, two or three times a-day, until the animal was nauseated, which would be known by its "slavering" at the mouth. The effect of nausea on the animal system is the reducing of arterial action, or, perhaps, in more comprehensive words, lessening the power of the circulation. The principle of this treatment throughout will be the reduction of excessive vascular action, either by depletion, blood-letting, purging, counter-irritation, or nausea, or by all conjointly, and on this principle only can disease be scientifically and successfully combatted.

*Farmers' Magazine.*

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## CULTIVATION OF THE CANINE BRAIN.

A SHORT time since, in an adjoining street to Hanover-square, an exhibition of a highly interesting nature took place, which is worthy to be put on record. The writer having learned that a French gentleman (M. Léonard), who had for some time been engaged in instructing two dogs in various performances which required the exercise, not merely of the natural instincts of the animal and the power of imitation, but of a higher degree of judgment and reflection than is commonly developed in the dog, was residing in London, obtained an introduction, and was obligingly favoured by M. Léonard with permission to hold a *conversazione* with his extraordinary pupils.

Two fine dogs, of the Spanish race, were introduced by M.

\* Hellebore is generally used by pig-doctors for pegging their patients in a variety of complaints. I consider that the good which frequently results from this mode of treatment is to be attributed more to the nausea which it causes, by being absorbed into the system, than to the local irritation which it produces.



L——, with customary French politeness, the largest by the name of M. Philax, the other as M. Brac (or Spot) ; the former had been in training three, the latter two years. They were in vigorous health, and, having bowed very gracefully, seated themselves on the hearth-rug, side by side. M. Léonard then gave a lively description of the means he had employed to develop the cerebral system in these animals—how, from having been very fond of the chase, and ambitious of having the best-trained dogs, he had employed the usual course of training—how the conviction had been impressed on his mind that by gentle usage, and steady perseverance in inducing the animal to repeat again and again what was required, not only would the dog be capable of performing that specific act, but that part of the brain which was brought into activity by the mental effort would become more largely developed, and hence a permanent increase of mental power be attained.

This reasoning is in accordance with the known laws of the physiology of the nervous system, and is fraught with the most important results : but we must not digress, and can only refer the reader interested in the subject to the masterly little work of Dr. Verity (“Changes produced in the Nervous System by Civilization”).

After this introduction, M. Léonard spoke to his dogs in French, in his usual tone, and ordered the one to walk, the other to lie down, to run, to gallop, halt, crouch, &c., which they performed as promptly and correctly as the most docile children. Then he directed them to go through the usual exercises of the *ménage*, which they performed as well as the best trained ponies at Astley's. He then placed six cards of different colours on the floor, and, sitting with his back to the dogs, directed one to pick up the blue card, the other the white, &c., varying his orders rapidly, and speaking in such a manner that it was impossible the dogs could have performed if they had not had a perfect knowledge of the words. For instance, M. Léonard said, “Philax, take the red card and give it to Brac ; and, Brac, take the white card and give it to Philax ;” and the dogs instantly did this, and exchanged the cards with each other. He then said, “Philax, put your card on the green, and, Brac, put your's on the blue ;” and this was instantly performed. Pieces of bread and meat were placed on the floor, with figured cards, and a variety of directions were given to the dogs, so as to put their intelligence and obedience to the severest test. They brought the meat, bread, or cards, as commanded, and never attempted to eat or to touch the bread or meat unless ordered. Yet more ;

Philax was ordered to bring a piece of meat and give it to Brac, and then Brac was to give it back to Philax, who was to return it to its place. Philax was next told he might bring a piece of bread and eat it; but before he had time to swallow, his master forbade him, and directed him to shew that he had not disobeyed, and the dog instantly placed the crust between his lips.

While many of these feats were being performed, M. Léonard snapped a whip violently, to prove that the animals were so completely under discipline that they would not heed any interruption.

After many other performances, evincing the wonderful sagacity and perception of the dogs, M. Léonard invited the writer to play a game of dominos with one of them. The younger and slighter animal then seated himself on a chair at the table, and the writer and M. Léonard placed themselves opposite. Six dominos were placed on their edges in the usual manner before the dog, and a like number before the writer. The dog having a double number took it up in his mouth, and put it in the middle of the table; the writer placed a corresponding piece on one side; the dog immediately played another correctly, and so on until all the pieces were engaged. Other six dominos were given to each, and the writer intentionally placed a *wrong number*. *The dog looked surprised, stared very earnestly at the writer, and at length growled, and finally barked angrily.* Finding that no notice was taken of his remonstrances, *he pushed away the wrong domino with his nose, and took up a suitable one from his own pieces and placed it in its stead!* The writer then played correctly; the dog followed, and won the game. Not the slightest intimation could have been given by M. Léonard to the dog; his play must have been entirely the result of his own observation and judgment. There was no trickery, no mesmerism here. It should be added, that the performances were strictly private; no gratuity was allowed even to the servant. M. Léonard is a gentleman of independent fortune, and the instruction of his dogs has been taken up merely as a curious and amusing investigation.

*Lancet.*

THE  
VETERINARIAN.

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VOL. XIV, No. 167.] NOVEMBER 1841. [New Series, No. 107.

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ON THE PRESENT STATE OF THE VETERINARY  
PROFESSION.

*By Mr. E. FRIEND, V. S., Walsall.*

My dear Sir,—I HAVE watched with considerable interest the opinions recorded in the few last Numbers of THE VETERINARIAN, and I have held my mind during that time perfectly open to conviction ; but I must confess, that nothing I have yet seen has altered the opinion I at first formed, on the controverted subject of the union of the Proceedings of the Medical Society with THE VETERINARIAN as a work of practical utility to the veterinary profession.

My decided opinion is, that the Society's Proceedings ought to be published separately, and for the use only of veterinary surgeons. I have two or three reasons for this. In the first place, the Society's debates should include the opinions of both practitioners and students. I would have the student encouraged, by all means, to state his opinions on these occasions ; and it matters not at all that these opinions may be incorrect. When there is a proper amalgamation of the practical man with the learner, the error will be pointed out, the student will be convinced, and in a way that will sink deeper into his mind, and be more beneficial to him than, perhaps, any other way of acquiring the same information.

Discussion almost necessarily implies contrariety of opinion, and from the proper expression of this truth ought to be elicited.

Now, let us look at the different effect produced by this in being thrown open to the world or confined to the profession. The world would be apt to think that this contrariety of opinion resulted from the fact, that we had no firm basis on which our superstructure is raised, and that our science is only the result of an arbitrary decision in the mind of each individual member. The educated veterinary surgeon, on the contrary, who reads the discussion, will be able to separate the wheat from the chaff ; he



will, at a glance, detect the opinion of the matured scientific practitioner from the mere tyro ; or even where men of the same standing and acquirements offer opposite opinions on the same subjects, he will be able to appreciate the many (to the public in general inexplicable) reasons that have induced this contrariety, without deteriorating in the least from the professional reputation of either. Again : he would be a more lenient critic on the observations of all parties than the many-headed public. It is worthy of consideration, also, that the speaker on these occasions is not at all times prepared to make his observations in quite the style, or in the words, in which he would choose to offer his opinions to the public generally ; and I am convinced that this circumstance alone could very materially narrow the efficiency and value of the Society, considered in reference to the veterinary profession.

Another reason which has great weight with me is, that I do not think it possible that the publication of the proceedings of a society of this kind (in which every member ought plainly to speak his opinion on every subject on which he enters, however it may be in collision with that of others) can tend to raise the character of our profession in the same degree which *THE VETERINARIAN* on its own standing has done, and will continue to do. I have often read some of the remarks made in the discussions of the Society with a mixture of pleasure and pain. I have been pleased to see that some have ventured questions and opinions with a view, doubtless, of gaining instruction simply ; but I have been pained to think that many might be apt to consider them the matured opinions of men professing our noble art.

Again, the writer to *THE VETERINARIAN* has generally time to give his remarks the benefit of a careful reconsideration ; and, if he chooses in that work to enter into discussion on any doubtful or disputed point, he does it with the certain knowledge that he has thrown down the gauntlet before the whole profession, and he ought to be prepared to play his part in the fight gallantly ; but an observation might be hazarded at a meeting of the Society which the speaker might afterwards wish to modify or recall, without the chance of doing so.

You are, Sir, as you are well aware, an entire stranger to me personally. I know you only as the Editor of *THE VETERINARIAN*, and in that capacity I beg leave thus publicly to offer you my sincere thanks for the manly and straightforward way in which you have hitherto conducted that Journal. I am convinced that you need not despair of being always surrounded by a host of contributors, who will not only support your work, but in a way that will place the veterinary profession, in the eyes of

the world, on a higher eminence and in a brighter aspect than it has ever yet obtained. I assure you, I long to see the time when, instead of the Veterinarian and Co., it shall again be "Left alone in its glory," *THE VETERINARIAN*, and with an implied N.B.—No connexion with any other work or party.

I am late in the field with my opinions: but they are now fearlessly and openly avowed; and I should be unjust to you and to myself if I did not thus publicly express them with regard to *THE VETERINARIAN* and yourself as Editor. You will perceive that I am exceedingly anxious for the welfare of the profession in the opinions I have adopted. The Veterinary Medical Society, under proper regulations, is calculated to be of immense advantage to the profession, and I sincerely hope that its future proceedings will be conducted in a way to obtain this desirable end.

A great deal has been said, and well said, as to the way in which our future communications to *THE VETERINARIAN* ought to be made; and yet I cannot help intruding a word of advice on this part of the subject also. I have seen many remarks in which the educated veterinary surgeon, in the plenitude of his acquirements, is apt to congratulate himself, that, despite the uneducated quack or their own nostrums, the proprietors of horses and cattle cannot do without us. I have lived long enough to know, that in many cases this is correct enough; but I have also lived long enough to know that we cannot live by these sort of cases alone. Our aim in our future correspondence with *THE VETERINARIAN* ought to be to endeavour to prove to the new professional reader, that a high degree of science can be applied to every branch of our art; and that what is considered often of little consequence—which every one has a right to attempt, and any one may do—is more important in the ultimate results than they are at all aware of at present. Let us prove to them that we have a reason founded upon principle for every operation we perform, and for every class of medicines we give. I shall venture a short essay of this kind at the conclusion of this paper, in which I shall endeavour to shew that an instrument that has been in every man's hands (which nearly every one who has ever kept a horse considers himself qualified to use and able to judge of the necessity for its use) has been the destruction of a thousand fold more property than ever was saved to the community by the non-employment of the regularly educated professional man. Let us endeavour to rescue what is too thoughtlessly considered the less important part of professional practice from the hands of the quack, whether proprietor or not, and the other will follow as a matter of course.

One word on that very disagreeable subject, the injury which

has been confessedly done to the veterinary surgeon, in connexion with one great body of his employers. In my own mind, I entirely exonerate THE VETERINARIAN from any blame whatever in the transaction. Ought I also to spare the Professor of the Veterinary College? I remember an anecdote, I have often heard repeated as a fact, of a hard riding farmer. He was leading man in a splendid run with the Duke of Rutland's hounds, when he came to a fine piece of growing wheat of his own, that was as yet unsullied by a hoof print. He stopped on the near side of the fence, without the courage to deface its beautiful appearance. Not so the next horseman,—he had no such scruples, and dashed on. The whole field followed, and when the last man but himself had done so, “Damn it,” said he, “it is no use mincing the matter, (these were his own words), one more cannot make much difference; so here goes:” and he followed *en route*.

The application is easily made. The galled jade will wince, and those who have suffered will complain. I shall not speak on this head, as most of your contributors have done, in the third person, but in the first. I calculate, as brother Jonathan would say, that, from the effect of the Professor's circular, and after-proceedings which it gave rise to, I lost the attendance on at least three hundred cases that I might fairly have calculated upon in the ordinary state of things. I should have less cause, perhaps, to grumble, if I could consider that what I have lost in emolument the community has gained: but I am thoroughly convinced that, during the late epidemic amongst cattle, in loss of milk, loss of condition, and loss of life, the great body of farmers throughout England were sufferers to a much greater extent than they would have been if they had been left to have called in their own veterinary surgeon, as they would most probably have done but for this unjust interference.

Now, Sir, if you will allow me, I have a wish to propose a motion for the consideration of the Veterinary Medical Society, through the medium of your pages. I have never yet addressed myself directly to that Society, and while the connexion between you, in a measure, subsists, will avail myself, if you please, of your kindness. I have long had it on my mind, that, in addition to the valuable ends already proposed by this Society, it ought to add that of affording protection to its members against the consequences of certain legal transactions. I have in my eye at this moment the case of Mr. Thomas, veterinary surgeon of Liverpool, against whom a jury brought a verdict, with damages, for doing what almost every veterinary practitioner does, that is, he tied a horse up after blistering him, in the most proper way he could possibly have tied him; a verdict which proves that there



is no single operation we perform that might not subject us to the same disadvantage and loss, if there were any untoward circumstances connected with or following it. I have never known or heard of a case in which the veterinary surgeon had an action brought against him, or was threatened with one, where he ought to have suffered damage. It has been invariably the attempt of some litigious person to take advantage of an accidental injury or circumstance not fairly under the controul of the practitioner, and from the consequences of which he ought to be shielded.

Without going into minute details, I would propose that every member of the Society be entitled to its protection, and assisted, to a certain extent and under certain restrictions, in every case in which an action is brought against him for a supposed professional error, on payment of one sovereign in advance, or, if thought advisable, on a written promise to transmit one on demand, whenever required for the legitimate end of the institution. The extent of the pecuniary assistance afforded should be regulated by a committee of a certain number, after due consideration of the peculiarities of the case; the restriction should be, that no case should be entertained in which the applicant had not, in the judgment of the committee, acted in an honourable and professional manner. Where such was proved to be the case, it would be the duty of the committee to obtain for him the best possible legal advice and assistance, to get for him, as evidence, such veterinary surgeons as could throw the most light upon the subject, and who would neither be cajoled nor bullied out of an honest opinion. I might add many advantages that would accrue to our profession from the adoption of such a measure by the Society; and if they feel disposed to endeavour to carry it into effect, I should be perfectly willing to give them my further views on the subject. Should they reject it, enough room has been already taken up in *THE VETERINARIAN*.

One request more, if you please, to the profession. It has always struck me that *THE VETERINARIAN* ought to contain a record of the decision, at least, of every horse trial that occurs in England. What an advantage it would be to every one of us to be able to shew to our employers, on every doubtful point in which our judgment is called in requisition, that such a decision corroborates our opinion! I earnestly hope that veterinary surgeons will bear this in mind, and send some account of, at least, the verdict in every trial in which they are engaged.

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May I be permitted to occupy another page or two of your Journal with a commencement of a series of Essays on some

## POPULAR ERRORS CONNECTED WITH OUR PROFESSION.

## No. I. BLEEDING.

Among the many remedial measures adopted for the relief of diseased animals, none, I am persuaded, have been so much abused as that of bleeding. It has been looked upon too much in the light of a manual operation. Every one has thought himself capable of performing it. But this would be but a trifling evil if the necessity for doing it were left to the judgment of the well-informed. The operation is, in itself, simple enough; but the life or death of the animal oftentimes hinges upon the result. I wish in this paper to expose the popular fallacy of bleeding, as is too much the case now, at all times and on all occasions. I have never yet, in the whole course of my practice, seen any disease, or any stage of a disease, in which I have not been, at one time or other, importuned to bleed, or where it has not been done for me. So strong has the current of popular opinion run in that direction, that a veterinary surgeon had better kill ten horses by bleeding than suffer one to die (no matter for what reason) without bleeding. I very rarely indeed, especially away from home, get a chance of bleeding at all; it is most commonly done (right or wrong) before I am sent for.

If we were to take a proper view of the nature of the operation—the abstraction of a portion of the vital fluid from the body of the animal, which we cannot readily supply if overdrawn, a fluid which is essential to the performance of every function in the animal economy, and from which all waste and repairs are supplied—we should pause oftener than we do before performing this most important operation. I am firmly convinced that, even in inflammatory complaints, thousands of horses have been destroyed from too copious bleeding, that might otherwise have recovered from the effects of the disease. Among the best informed practitioners of my acquaintance the rage for repeated bleedings has long been over. In an extensive and successful practice, *I have very rarely indeed bled twice for any one case of whatever kind, and never thrice for many years*; and I attribute my success, principally, to the extreme caution I have adopted in the use of the lancet. I never bleed at all in a doubtful chance of success from the operation. I will be well assured that venesection is perfectly indicated before I open a vein.

I am extremely happy to hear that the public does read *THE VETERINARIAN*; I heartily wish that every proprietor of horses and cattle did so. Allow me to address one word to them on the extreme absurdity of the general practice adopted, of bleeding before sending for a veterinary surgeon. Supposing that the case



is one that absolutely requires it, and that the professional man would do it on his attendance, what are the consequences of performing it before his arrival? We will suppose, for a moment, that it was one of congestion of blood in some internal organ or surface, and that your bleeding has relieved that symptom of the complaint; you have then removed that which would have made the case perfectly intelligible to him if he had seen it previously to this venesection, and you leave it comparatively (it may happen) a case of doubt and darkness. But if, on the other hand, your bleeding chances to be altogether improper as a remedial system of treatment, or there has been an impropriety in the measure as to deficiency or excess, you have then detracted materially from his chance of succeeding, though it is generally expected that he must take your misadventure into his own share of the responsibility. I would also urge on you the impropriety of pressing the veterinary surgeon in attendance to perform the operation, as is too commonly the case when he displays reluctance to do so.

Every well-instructed practitioner will do this when his judgment directs it ought to be done. But there have been thousands of instances in which he has yielded to the prejudices of his employers against his own better judgment, and where death has supervened as a consequence of it. I can painfully call to mind two or three instances in which I have done it from this reason, and when I as certainly caused the death of the animal by the operation, as if I had passed a bullet through his brain. I never allow myself to be persuaded now, though I am often critically situated; for so great has been the rage for bleeding, that nothing but complete success can always convince my employers that my practice is the correct one. Let us just glance at a case of inflamed lungs, where bleeding, bleeding, bleeding, has generally been held to be the sheet-anchor. In the early part of the attack, where congestion is the leading symptom, the practical man will avail himself of the advantages of venesection to an extent of which he, and he alone, will be able to appreciate the advantages. Probably, on his succeeding visits, he will find the inflammation extending to serous or mucous membranes, or it will present indications of having assumed a typhoid character, or it may be going on to effusion. It matters not; let the owner have been once convinced that the case is one of inflammation, and evidently not progressing to convalescence, and he will as assuredly urge you to bleed. You will be told, perhaps, that the horse has been blowing hard—that his pulse is too rapid. I would never bleed after the first time for these reasons, without there were other indications sufficient to convince me of its absolute necessity. I have seen it in scores of instances, where, instead



of bleeding, I have found that these symptoms counter-indicated venesection. Too much has been already abstracted—the animal was partially destroyed—the blood was hurried through its vessels by an extra effort of nature—the abdominal muscles were called upon for an extra exercise of their powers, amounting sometimes to spasmodic action, and all this the effect of animal weakness, and not strength. For instance, you will have all these symptoms occurring from internal hæmorrhage. I recollect once bleeding a horse that had been hunted the day before with these appearances strong upon him, and in whom the case proved to be hæmorrhage from the liver. He died before I had abstracted a quart of blood. Another mistaken notion I have to notice is, that fat horses require more bleeding than others—no fat horse can stand so much bleeding as the horse in good working condition. This is an error which has caused the death of hundreds of horses from Lincoln, Horncastle, and the other large fairs to which horses are brought as fat as farmers can generally make them, and which are then erroneously called in high condition. Thus, one error begets another. The mistake of their being in high condition leads to the mistake that they can bear a greater abstraction of blood than one with less flesh, and, as I said before, the consequence is too often fatal. I am quite aware that the prejudice in favour of so much bleeding has been produced by remarks from high authority; but I hope that this, too, will pass away, with other absurdities in treatment too hastily and unreflectingly adopted.

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## A CASE OF STOMACH STAGGERS IN A MARE.

*By Mr. JOHN KENT, V.S., Bristol.*

HAVING ascertained the particulars respecting the manner in which the mare, whose history I am about to relate, and from which the stomach and portion of liver was taken which I forwarded to you about a week ago, had been treated during life, I will now briefly narrate the same.

She was about ten years old, and had been in the same hands during a great portion of her life. Her food during the whole time had been almost restricted to hay, with occasionally a feed of corn when going on a journey. Her work was usually in a light cart a few times in a week. She seldom worked all day, and sometimes, but not often, was used for the saddle, and I believe her groom was her owner. She had only worked once, and that a ride for pleasure, for some days prior to her death.

On the day of her death she travelled twenty-two miles out, and home again. At the end of the first twelve miles in going out she began to purge, which continued until her death, and during the whole of the journey she neither ate nor drank. Her owner says that he did not at any part of the journey exceed six miles an hour, and, a great part of the way home, he led her—that she hung down her head and reeled about, but never fell.

On her arrival at home I was sent for, and found her with her head placed against the corner of the stall, pushing with all her weight and strength. The state of the pulse I could not ascertain, from the violence of her efforts in pushing against the corner of the stall, and in about half an hour after she reached home she died. I did not see her die, for although I knew her life could not be saved, yet at the wish of her owner I went home (the stable is the next yard to mine) to prepare a dose of medicine, and on my return found her dead, with the forehead pressed against the corner of the stall. She was on her knees, and her body alongside the wall. They who had remained in the stable during my short absence were not aware from her position that she was dead until I told them, but thought that she was on her knees still pushing.

I told her owner it was a case of stomach staggers. From his statement I felt satisfied that it could not arise from over-distended stomach, and therefore assured him that, in my opinion, it must arise from inflammation of the stomach: as for medical treatment, there was no opportunity for it.

The post-mortem appearances were, as the stomach has shewn you, inflammation, not very acute, of the whole of the villous coat and part of the cuticular portion. It contained about three pints of food well masticated, in a fluid state, about the consistence of tolerably thick gruel.

The contents of the large intestines were in a similarly fluid state, although she had travelled forty-four miles subsequently to having swallowed food or liquid of any kind.

The mucous membranes of the cæcum and colon were of a leaden hue—the vessels in the membranes of the brain were very turgid, but it could not be said that they were actually inflamed. The lungs shewed some reddening, as might be expected, from having travelled so far in such a state.

The bones in the liver I cannot say any thing decisive about; they were imbedded in the margin of the liver, lying in contact with the diaphragm, which bore an appearance as though some

friction had been produced by rubbing against it. I do not recollect having seen bones in the liver on any previous occasion\*.

In the early part of my practice in Warwickshire, while I resided at Stratford-on-Avon, I had frequent opportunities of seeing and treating horses for stomach staggers, especially during the months of July and August. In those cases, the stomach was almost always over-distended. I remember one where the stomach was empty, but in the cæcum there were more than 12 lbs. of sand. The owner, who kept about thirty farm horses, lost five before I could prevail on him to use preventive means. The weather was very rainy, and according to a very common, but, as far as the health of the animal is concerned, a very bad practice, the horses were chained by the leg, to feed on vetches, which, from the land being sandy and the weather rainy, were very dirty. As soon as I could prevail on the owner to allow it, I gave alterative aperient medicines, and directed the horses to be turned loose into a grass field, and although the vetches were still given as food not a single case occurred afterwards.

I had several opportunities of treating horses for the same complaint, where they were at grass, but the same preventive treatment was in those cases effectual. From what I have seen, I am of opinion, that in those districts where farm horses are kept during summer on vetches, more horses die during July and August from stomach staggers and inflammation of the bowels than during the other ten months of the year, which might be easily prevented by medical treatment, greatly to the advantage of the owner, and, of course, with some benefit to the medical practitioner. During my practice in Bristol, now nineteen years, I have had very little to do with staggers. I should think that London practitioners and the Veterinary College are similarly circumstanced as regards staggers.

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\* I remember when, many a year ago, I used to be a constant attendant at the knacker's yard, meeting with two instances of ossification of the posterior and inferior edge of the liver of the horse. I have since found them occurring in several of the species of animals which I have had the opportunity of examining in the Zoological Gardens. The depositions of bone are sometimes in the form of incrustations or plates—or of granular spots imbedded in the substance of the liver. Sometimes there has been a white hard friable tissue, which would crumble under the fingers—at other times there were thick cancerous masses, with spots of induration.—Y.



## CONSULTATIONS.

## No. XXIII.

## OBSCURE LAMENESS.

Sir,—I SHOULD much wish to have your advice on the following case. The last day I hunted on the 27th March, my old black horse became lame, at trotting only. I was not aware when it happened, as I only discovered it when coming home slowly on the road. I did not remember when he could have hurt himself, except when leading him over a step in a dry stone wall, he did it lazily, and pulled down some stones after him. On arriving at home, we examined and could discover nothing, but that he winced slightly on our pressing the front (inside) of the stifle joint. After waiting some days, we rubbed on a little liquid blister, since which there has been no change, the lameness being the same as at first. He walks very well, and brings the lame leg quite as far under him as the other, so that scarcely any thing can be challenged; but when he trots, he drags the leg, steps short, halts, places it more under him than proper, bringing the outside of the foot first to the ground. He has had gentle aperient medicine, and is in high spirits, so much so, that, when led out, he jumps about, and does not fear to use his lame leg. We can discover no dislocation of the fetlock, fulness, or inflammation of any kind.

I shall be obliged by your giving me your opinion as to the cause of lameness, and proper mode of treatment, in writing, as soon as convenient.

I remain, your's, &c.

G. BENNING HORNE.

Clyde Street, Edinburgh, April 26th, 1840.

Sir,—I am unable to give you a very confident opinion regarding the seat or nature of the lameness of your horse without seeing and handling the limb. I can only guess at it, as much depends on the touch; and the swelling arising from slight injuries is often so trifling, that a person not in the regular practice of examining for the seat of disease may very readily overlook what would lead me to a decided opinion of the case. If you had not observed him “wince” when the stifle was pressed, I should have been inclined to refer the seat of disease to the pubis; that is, the lower part of the quarter. The symptoms you describe are such as are generally exhibited in that case, while the manner of placing his foot on the ground (that is, the “out-

side" of it) is very common in spavin; and an injury of the pastern bones may also produce similar symptoms. But if the disease does exist in the stifle joint, by a careful inspection (provided the effects of the liquid blister has gone off) when the horse is made to stand *firm on both feet, and then placed on a level surface, and as exactly as possible in the same position*, you will find by comparing both legs on the inside of the joint, and about six inches back from the anterior of the stifle, a small swelling, about an inch and a half in diameter, raised, perhaps, about three-eighths of an inch in the centre; in which case the articulation between the femur (thigh bone) and the tibia (leg bone) is the seat of the disease. Or, using the same precautions as to position, you will find a greater fulness at the anterior part of the stifle in the diseased leg; in which case the articulation between the patella and femur is the seat of disease. But I do not expect you will find this to be the case; because, where the injury is in the anterior articulation, there is always more or less *knuckling* at the fetlock joint, which you do not mention, but which, if it did exist, would not have escaped your notice. When an injury has taken place in either of these articulations, there is almost invariably pain evinced while the animal is standing in the stable, which is shewn by his frequently drawing up his leg, and that is done by twisting the pelvis (quarters) upwards, and not by flexing the stifle; which, on the contrary, in severe cases, is held peculiarly straight, and which is one of its easiest positions: you must not mistake, in examining, slight ticklishness for wincing with pain, which is sometimes done. If you do not discover some swelling, you had better write me again; if you find the disease is in the stifle, repeated blisters, firing, or setons, are now the remedies which will be required. Has my old pupil, Bryce, at Doune, seen the horse?

I am, Sir, your most obedient servant,

(Signed) WM. DICK.

## A SHORT HISTORICAL RESEARCH ON THE EPIZOOTIC

WHICH HAS LATELY APPEARED AND IS STILL PREVAILING  
IN MANY PARTS OF ENGLAND.

By WM. ERNES, Esq., V. S.

FROM 1714 to 1823, no less than twenty of these epizootics have been observed in France, Germany, and Italy, and which occurred in the years 1714, 63, 64, 71, 76, 78, 83, 86, 87, 97, 98; 1804, 6, 9, 10, 11, 14, 17, 19, 23.

They generally prevailed among neat cattle, sheep, and swine. The German veterinary authors give the following description of it:—The animal appears dull—there is loss of appetite—rumination is altogether suspended, or intercepted and slow—cold shivers are followed by an increased temperature of the body—the muzzle is dry and hot, and the mouth dry. The animal is slightly costive; and, when the fever runs high, the urine becomes of a dark brown transparent colour. The pulse is frequent, and the respiration increased. The more violent the fever the more intense will be the exanthema, which appears about the second or third day; its seat being either the mouth, throat, nostrils, feet, or udder: perhaps more than one of these is affected at the same time. The duration of the disease is from seven to eleven days in its mildest form.

Its causes are miasmatic, and it appears to have had its origin in that hot-bed of epizootics, the marshy plains of Hungaria. It has always been freely communicated, either by contact or inoculation, not only to animals of the same class, but also to those of a different order, and even to the human subject, by the use of the milk and flesh of the infected animals.

The treatment, as described by these authors, was directed to the general fever, as well as the local irruption. For the former, a mild antiphlogistic was recommended; while, for the latter, repellents and caustics were carefully avoided, as the exanthema was, by them, considered the necessary metastasis of the fever; added to this was a well-regulated diet, with a clear and airy lodging.

Hurtrel d'Arboval gives an account of twelve similar epizootics that have occurred in France in the same lapse of time as those observed in Germany, and which he describes in the following manner:—"During the first period of the development the animal is dull; there is loss of appetite, heat of the skin, and fever. The mucous membranes of the eyes and nostrils are injected; that of the mouth is hot and red. The expired air is burning hot, the urine high coloured, and the fæces natural: this latter symptom, however, is not always present, for Lafosse has observed one of these irruptions accompanied by diarrhœa.

In the second period, which begins about the third or fourth day, the fever increases in intensity, and pustules appear in the mouth, throat and nose. Deglutition becomes difficult, and the animal is much emaciated. These pustules are sometimes so numerous that they occupy the whole internal surface of the mouth and throat. They are sometimes of spherical, and, at others, of an irregular shape, being, in the whole, not materially different from the common aphthæ.



At the third period, a crust has been formed on the pustules, which soon comes off. This happens about the seventh day, or later, when the case has been severe. At the same time as the eruption begins to disappear, tumours appear at the feet, the fever abates, and the appetite returns by degrees.

The epizootic that prevailed in Moravia in 1764, attacked neat cattle, sheep, goats, and swine. The two latter suffered most, and the disease was more fatal to them.

The milk of the affected animals was not so sweet as in health, and was observed to curdle as soon as it was brought near the fire. Those who made use of it felt a sensation of heat and constriction about the throat, and soon contracted the disease.

The same epizootic prevailed in 1763 and 1764 in Auvergne, and in the Perigord; and also in the neighbourhood of Paris. It mostly attacked neat cattle and horses. It was observed principally in the capital and near Alfort. It continued in 1810 in the department of Calvados, chiefly attacking neat cattle and sheep: it also prevailed about the same time in Italy, without any variation in its characters, running its course from ten to twenty days, without any great loss of life. In the two species of ruminants which it attacked there appeared ulcers on the interdigital portions of the feet, and which caused great pain and lameness.

In 1810, and in the neighbourhood of Lyons, besides cattle, goats, and sheep, it also attacked the monodactyle. It was observed at the same time in different parts of Switzerland. The epizootic which manifested itself in 1764 attacked nearly all domesticated animals, and renewed itself in 1819 in the department of Oise; presenting, besides the ordinary characters of the epizootic, some remarkable peculiarities; viz. great swelling of different parts of the head at the time that the pustules made their appearance. The tongue, in particular, was so much swollen that it protruded three or four inches out of the mouth. The sublingual ganglia became swelled and tumefied, sometimes to the size of a large egg, and which often terminated in abscesses; but the disease was mild in some cases.

Pouchet and Potolle, who have closely followed this disease, do not mention the lesion of the feet, which, probably, did not exist in this instance.

The treatment recommended by Hurtrel D'Arboval consists, first of all, in a well-regulated diet; a clean and airy lodgment, in which the temperature is to be well regulated, particularly so as not to fall too low. To the herbivorous animals he recommends warm drinks acidulated with nitre; and, when the appetite is not much impaired, green food of the best quality should

be added; in particular, that which does not require much mastication. To the carnivorous animals, light broths made of veal should be given, or drinks composed of milk with a decoction of barley, to which may be added a little honey. General bleeding he never recommends, not even when the eruptions are accompanied by violent inflammation and febrile reaction. Leeches to the gums, where they could be applied, and where this cannot be done, slight scarification, the bleeding of which is afterwards promoted by steaming the lower parts of the head. The mouth to be gargled with mucilaginous decoctions.

By these simple means (he continues) we often succeed in allaying the general irritation, promoting the development of the vesicles, and favouring the formation of the eschar. He does not recommend the gargles to be injected into the mouth, on account of the percussion which would result from it on the affected surfaces, and the great pain that would be produced. They are best administered by means of a fine clean supple linen cloth, which is to be fixed to the end of a wooden spatula: the vesicles may be opened with a scalpel, lancet, or curved scissors. The gargles should then be changed, and made slightly deterative, and may even be rendered caustic by the addition of acetic or sulphuric acid.

This treatment should be modified according to the complication of the disease, and continued until the disappearance of the vesicles; after which the appetite returns, the animal becomes lively, the secretion of milk increases, the convalescence is established, and nothing more is required but a generous diet.

*Hurtrel D'Arboval, Dict. Vet., tom. ii, 113, &c.*

Dr. Rayer has given the following account of the same epizootic which prevailed in the neighbourhood of Paris, in 1839, attacking neat cattle, sheep, goats, and swine. He describes three periods—the first, fever; the second, irruption; and the third, desquamation. The fever lasted two or three days, during which time the animal appeared dull—the pulse accelerated—the secretion of milk diminished, with a slight alteration of its constituent elements—the coat rough—the base of the horns and the eyes hot—a slight cough; but no sensible change in the respiration—the appetite diminished—the thirst increased—the alvine evacuations natural, or sometimes soft.

Nevertheless, the *ensemble* of these symptoms presented nothing serious. About the third or fourth day an eruption appeared on the mammæ, and the inner surface of the lips and gums, and bifurcation of the feet. The period of desquamation

is about the tenth or twelfth day, and is followed by a gradual return of health.

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[We are much obliged to Mr. Ernes for this interesting account of the epidemic among cattle, &c. in some of the continental states. The subject of the epidemic must soon come seriously before us.—ED.]

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### ON THE DISEASES OF CATS.

I AM not aware that there is, throughout the pages of your Journal, a single paper on the diseases of the cat. That this is a most valuable animal, I think every one must allow, and it adds no little, with a faithful dog, to the comfort of a house. If it is thus useful, it surely deserves some attention and regard. I am sorry, however, to say there are those in our town, and some of them assume the gait of and would wish to be considered as gentlemen, ay, and I have seen it among some of the students at the College, who, instead of alleviating their sufferings, took a base pride in hunting and torturing the poor animal with dogs, and for this purpose they were in the habit of stealing these animals from any house they could for their low, base, grovelling sport; but to such I would say,

“Remember, He who made thee made the brute;  
Who gave thee speech and reason, form'd him mute;  
He can't complain: but God's omniscient eye  
Beholds thy cruelty—He hears his cry;  
He was design'd thy servant and thy drudge;  
But know, that his Creator is thy Judge.”

Sometimes these animals live to a great age. I know that several have died in this town that have been from eighteen to twenty-five years old, and, as a matter of course, they must have been highly valued.

There is at times a great mortality amongst them, particularly in the houses of painters and those who deal in lead, with whom it is almost an impossibility to keep them to their full growth. Their death is probably occasioned by the lead adhering to their feet, and being afterwards licked off by them. Sometimes at these places, and even at others, they will run about as if they were mad, and, after awhile, become weak and debilitated, and ultimately die.

I once saw a cat's eye torn from the orbit with a dog's claw, and which hung on the edge of the lower eyelid partially attached



by some of the muscles. I removed it, but I do not think that the optic nerve had been torn through. The cat for a little time afterwards appeared to be going on well; but in the course of a month after I ascertained that she had pined away and died.

A cat was brought to me a few years ago with a large fungus growing from the whole surface of the cornea, and which I was desired to remove. I accordingly had his legs and body wrapped up in a thick cloth, so as to prevent him from scratching (it is a good practice to secure them in a boot) and a surgeon's assistant held him down on the table while I removed the eyeball, which I shortly did; but "lo and behold," when we came to liberate him, "the spirit of the beast that goeth downward" had fled. The cause, I believe, was from the person having pressed too heavily on him, for the eye was easily extracted, and the brain not at all injured by me, and the disease was but a mere fungous growth on the cornea. This case brought me under sad disgrace for a time with a very humane, well-intentioned lady of this town, who is a great cat doctor and fancier, and who had brought the cat to me to have the eye removed.

Soon after this the same lady took another cat, with a tumour on its side, to a surgeon in this town, for the purpose of being removed; but ill-luck attended this operation also, and the cat died, and the consequence was the following letter to the operator, from which you can imagine how he stood with her. How is it that the warmest and most kindly feelings and these fits of ungovernable and disgraceful rage can alternate in the same bosom?

*To ———, Surgeon, Whitchurch.*

Sir,—You told a person a few days ago that what you did to my poor animal was necessary. You may well blush, and disown a deed that is unparalleled, that is not to be found upon record, or in the annals of history. Could you find no other victim to sport your wanton tricks upon but my gentle and beautiful animal, who had lain by my side and upon my pillow for eight long years? What have I done and encountered with for you? I have suffered, upon various occasions, the most painful anxiety for your credit. I have covered and concealed your errors, and rejoiced, yea, even triumphed, in your success. And is it thus that you reward my fidelity? You have violated the laws of humanity! you have disturbed the domestic tranquillity of an upright family, who were your truest and faithfulest devoted friends. You have rushed forwards, and with a rude hand burst asunder the sacred ties of friendship, and made a breach that can never be healed. You have unmanned yourself, and filled

the tenderest heart with unutterable woe; but the vengeance of the Most High will follow you. He will pursue you, and take you unawares, and disappoint you in your most sanguine expectations. Whoever may wink at your baseness are without principle, and their motives are for mercenary ends.

You are just now in high prosperity; you can give here and dispense there; but who have been the authors of all this? Why, they you have so barbarously and treacherously wounded. Go now and seek some obscure retreat, for you have tarnished your honour, and your glory is at an end.

Sept. 9, 1836.

P.S. Tell your accomplice\* that, although a dunce in practice, he is an adept in the school of villany.

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The following are some of the diseases of the cat that have come under my notice.

#### INFLAMMATION AND ULCERATION OF THE BOWELS.

On 20th December, 1840, I saw a fine healthy cat, six or seven months old, that was taken unwell, and in a few days afterwards died. The symptoms were sickness, vomiting a small quantity of slimy matter, lying in a helpless listless state bordering on paralysis, unwilling or unable to move, yet shewing evident symptoms of pain, and the respiration considerably increased.

*Examination.*—At about half way along the small intestines their parietes shewed a track of inflammation, and on cutting into them the mucous membrane was also inflamed, but the inflammation not running to any considerable extent. The curious curve (as in the dog), called the cæcum, was full of rather hard fæces, and there were some also in the rectum. In the rectum there were three patches of ulceration. All other parts were beautifully sound. This case, I fancy, was produced by lead, as the cat was accustomed to ramble into a painter's premises.

#### DISEASED LIVER.

ONE day a cat of my own, about five months old, was seen to be very sick; but we fancied it was consequent on having eaten too freely of cows' lungs, as she threw a great quantity up. The next day she was missing, and we could not find her any where; but in five days after we found her in the cellar dead.

*Examination.*—The *intestines*, I fancied, were a little thickened,

\* Apprentice.

but did not shew any other disease. The *liver* was the seat of disease, and I have no doubt caused her death. Its external surface was studded over with yellowish spots, but they did not feel hard or much distinct from the other portion of the liver.

On cutting into it, these specks were found to be uncommonly numerous throughout its whole twofold substance, so that, I fancy, it may be said to have miliary tubercles. They were soft, and evidently in a state approaching to suppuration; indeed, some had suppurated. There was gall in the gall-bladder and intestines. Near the cæcum there was an enlarged mesenteric gland, of the size of a marble, nearly in a suppurative state. All the parts were sound.

*Observations.*—This cat was in good condition, and the day before it was missed was as lively as usual, and fed well; but she had always a great inclination, especially for the last two or three months, to go and sleep in cold places in the cellar, for whole days together and nights, merely coming out for a few minutes for her meat. Whether this produced the complaint I cannot say, but she never shewed symptoms of active disease.

#### WORMS IN THE INTESTINES.

18th January, 1841.—A young cat, six months old, was in a sickly state when brought to a person in this town, and only lived about a week afterwards. There were no particular symptoms to enable a person to say what the disease was, only a gradual pining away, and a dislike to food.

*Examination.*—There was nothing in the stomach or intestines, but a little mucus. At about a third way along the intestines from the stomach, I found three tape worms, about four inches long. All parts were sound, and I could not discover any thing to account for death but the worms.

#### INJURY OF THE URETHRA AND RETENTION OF URINE.

On the 7th October, 1841, a gardener was rolling a cast-iron roller in the garden, when a beautiful young cat, in one of his playful antics, leaped inside it, and in attempting to leap out again, was accidentally crushed thereunder: he lingered for four days afterwards, and then died. I did not see him alive, but he was afterwards sent to me to be examined.

*Examination.*—Between the skin and abdominal muscles there was a great quantity of diffused extravasated blood. On laying open the abdomen, the cause of death was easily discovered, as the bladder appeared distended to the utmost, as red as blood; and on further examination I found that there was a great



deal of extravasated blood about the pelvic portion of the urethra ; on attempting to separate which, the bladder was left completely unconnected with the urethra ; and I almost fancy the urethra was torn through, but how it could be so injured, I can hardly tell, as the parts around, except about the bladder and urethra, were comparatively sound. Could it be produced when the bladder is in a distended state, by suddenly pressing on it, and forcing it towards the diaphragm, and causing a separation from the urethra ? The kidneys were highly inflamed, and the ramifications of the bloodvessels were seen in a most beautiful manner.

There were five principal arteries on each side of the kidneys, and each anastomosing with its fellow on the greater curvature. The ureters were dilated with urine to the size of a crow-quill. About thirteen inches from the stomach, there was a tape worm about four inches long, and attached at one end to the intestine. After it had been soaked all night in some water it was, I should think, ten inches long, and much wider and larger.

On cutting open the bladder, it was found to contain a large quantity of reddish urine, and, on separating the coats of the bladder, the innermost coat or coats were completely gorged with blood, of a light venous hue, leaving the outer one comparatively of a natural colour. The rectum was nine inches long, the cæcum two inches, and small intestines four feet six inches. The rectum and cæcum had hard fæces in them. The stomach had only a few hairs in it, and not even a trace of mucus. There was a little bile in the two first inches of the duodenum, and the small intestines had no food in them, and only a little mucus.

The cause of his death, I should say, was probably from a rupture of the urethra, and the retention of urine was caused by the bladder being plugged up with inflammation and extravasated blood.

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## FURTHER EXTRACTS FROM DR. MARSHALL HALL'S WORKS ON THE NERVOUS SYSTEM.

[Continued from page 623.]

### THE ACT OF DEGLUTITION.

ACCORDING to the views of Dr. Marshall Hall, from whose works these extracts are continued to be made, this act has never been properly or sufficiently explained ; nor could it, in fact, be in consonance with his notions, until his doctrine of excito-motory physiology had become developed. In the opinion of our author,

Bostock, Magendie, and Mayo, have all failed in their attempts at explanation. Experiments have shewn, that when an instrument is introduced upon the root of the tongue and tonsils, an act of deglutition ensues ; that the finger passed into the pharynx of a living animal through a wound in the neck becomes forcibly grasped ; that the same happens even after decapitation ; but that no action takes place after the division of the pharyngeal nerves, or the removal of the medulla oblongata. M. Flourens found, that an animal, deprived of his cerebrum, no longer ate nor drank of his own accord, although food pushed a certain way into the mouth became perfectly swallowed. The explanation of which is, that, brainless, he could neither feel his food, nor feel any appetite or desire to take it ; but when the food was advanced as far as the pharynx, there it came within the province of the excito-motory nerves, to the excitors of which it imparted the necessary excitation, and by the motors of which, through the medium of the medulla oblongata, the muscular parts of the pharynx and œsophagus were put in action, and the bolus transmitted in the usual manner into the stomach : so that, in truth, of the several acts of deglutition, only the acts of taking food and masticating it are voluntary or recognisable : the act of swallowing, although one that is at the beginning felt, because it is commenced by voluntary effort, goes on afterwards independently of the will ; is, in short, purely an excito-motory act. Supposing, therefore, that we are treating any case in which the voluntary power—the power either to take food or to masticate it—is destroyed, we shall find we can well support life by the introduction of balls of proper aliment—as we would balls of medicine—into the pharynx.

There can be no doubt, therefore, that, as far as the pharynx is concerned, swallowing constitutes a reflex function, requiring entirety of the medulla oblongata, and the actual contact of some substance as a stimulus ; but, in regard to the completion of the act, although the contraction of the œsophagus takes place independently of volition, there exists some doubt whether it be a reflex action, or one partly attributable to irritability. What chiefly creates this diversity of opinion, is the difference of result obtained from the division of the par vagum. MM. Leuret and Lassaigne report that a horse, after the removal of five inches from each pneumogastric nerve, ate seven pints of oats ; half of which, eight hours afterwards, were found in the stomach, half in the duodenum. In the dog, after the division of these nerves, deglutition was perfectly performed. But in the rabbit, according to Sir A. Cooper, Drs. J. Reid and Marshall Hall, the food stagnates in the œsophagus.

The cardia is paralysed after section of the pneumogastric nerves : in fact, "the pneumogastric," says Dr. M. Hall, "*is pre-eminently the internal excito-motory nerve.*" The Doctor also ascribes an "actual, not to say *active*, dilatation to the cardia, as well as to some other sphincters." Indeed, "in regard to the sphincters, it is plain that they have the *power* of dilatation : gas may escape from the intestines noiselessly, and the urine from the bladder without effort ; events very different from that generally supposed, of the sphincters being overcome by an antagonist force."

#### IRRITABILITY AND TONE OF THE MUSCULAR SYSTEM.

Hitherto we have accompanied the Doctor through his "excited *reflex* actions of the true spinal system : " we will now give a transcript of "the *direct* action or influence of this (and of the ganglionic ?) system."

A series of experiments published by the Doctor in the Transactions of the Royal Medico-Chirurg. Society, seem to prove "that the irritability of the muscular fibre in the limbs depends greatly on the integrity of the spinal marrow." Not, however, altogether ; for, adds the Doctor, "although I have observed the irritability to be *very greatly* diminished by the removal of the influence of the spinal marrow, I think I never knew it to be completely annihilated under such circumstances."

THE TONE of the muscular fibre—which appears but a modification of its irritability or contractility on the application of certain stimuli—is also evidently much influenced by, if not dependent upon, the presence of the medulla spinalis. The Doctor experimented on two rabbits. From both the heads were removed, from one the spinal marrow also. The limbs of the former retained a certain degree of firmness and elasticity ; those of the other became perfectly lax.

#### THE GANGLIONIC SYSTEM.

"The cerebral system," says Dr. Marshall Hall, "is concerned with *psychical* or mental acts merely ; the true spinal, with *physical* acts on the *masses* of bodies to be appropriated to or expelled from the animal economy ; whilst the ganglionic system relates to the *chemical* changes in the disposition of the *atoms* of the animal body, its solids, fluids, &c." "As the true spinal system governs the ingestion and egestion of *masses* in regard to the animal economy, so the ganglionic relates to the interstitial absorption, deposition, re-absorption, and the secretion of the *atoms* or *particles* of which the animal form is composed, and of



the ingesta and egesta. I need scarcely observe, that there are *external* as well as *internal* parts which require the interstitial deposit and re-absorption of the atoms of animal matter; it was to be expected, therefore, that there would be an external as well as internal ganglionic and nutrient system. This we accordingly find, although it has never been so viewed or stated before. For the external organs, the ganglia, on the posterior roots of the spinal nerves, are probably destined; for the head, the series of ganglia found upon and in connexion with the fifth or trifacial nerve; for the lungs, stomach, &c. the pneumo-gastric; for the internal viscera, the ganglionic system, commonly so called."

"Sir Charles Bell has, I believe, distinctly proved the difference of function between the anterior and posterior spinal nerves, and between the respiratory and other nerves; brilliant discoveries, which will, as long as anatomical and physiological science last, perpetuate and endear his memory: but there is no connexion between the function of sensation and the existence of a ganglion. The unequivocal sentient nerves, as the olfactory, the optic, the auditory, *are without any thing very distinct of this kind*; while the ganglionic nerves *are without sensibility, or nearly so.*"

"The questions still remain—Why are the portio major, of the trifacial especially, and of the posterior spinal nerves, provided with ganglia? The reply to these questions, and the argument, may be stated thus:—1. There is an internal nerve, for formation, nutrition, secretion, &c.—2. This nerve is ganglionic.—3. There are external organs to structures requiring nutrition, &c.—4. There are also external ganglionic nerves. The inference is plain, that these constitute the external ganglionic sub-system; the fifth especially, abounds with ganglia."

"It is true, that the semilunar and external spinal ganglia differ in appearance from the ganglia of the sympathetic, as Sir C. Bell has well displayed. What is the nature of this difference? To this question I find no reply in authors. It is plain, however, that the difference consists in their being alone *plexic*. The internal ganglionic nerve is purely nutrient; its ganglia are simple. The external involve sentient, and, I believe, excitory nerves, with the nutrient; they combine, therefore, the appearances of the plexus and of the ganglion."

The distribution of the trifacial nerve to the parotid and submaxillary glands "can only be for secretion;" also, *the recurrent of the fifth*, discovered by M. Arnold, can only be distributed between the laminae of the tentorium—not for sensation, for it cannot be *touched*, nor for *excited* motion, but—"for formation and nutrition."

## A CASE OF OBSCURE DISEASE IN A HORSE.

*By Mr. W. MOGFORD, V.S., Guernsey.*

Dear Sir,—WILL you allow me to consult you upon a new and extraordinary case to me? The nearest resemblance to any thing described like it, is “gastro enteritis,” mentioned in the second volume of Mr. Percivall’s Hippo-Pathology. I will first describe the horse, and his history.

He is an island animal, got by Orator, the grandson of Mr. Mellish’s Sancho; his dam, by a thorough-bred colt by Gohanna. He is a little-big horse, of most perfect symmetry, and rising eleven. While in the possession of his late owner, General Ross, he was severely attacked with diabetes; and two other horses, the property of the same gentleman, died of the same complaint. After the General’s leaving the island he was purchased by a Mr. Butie, who is still his owner. In his possession he has done some hard work, both on the road and turf, and, in all superficial appearance, has been, for the last five years, in good health. In the year 1840, at the time of the races (July), he slept at a stable in which a quantity of dogs constantly were kept, and he was severely attacked by an insect called commonly “the tick.” After the removal of the insects, numerous round red rings, or spots, remained, that looked very much as if they were occasioned by the disease called scarlatina. I was not, however, called in professionally; but his master, acting for himself, subtracted a small quantity of blood, and used cooling medicine, with green meat for food. The animal was thus restored to a comely appearance in his owner’s opinion, but I confess not in mine, for there was too much of a yellow tinge about him.

In September he was turned out to grass, and came up in miserable plight, having a coat as long as a goat. I was soon afterwards sent for, he being off his food. I found, as I conceived, a torpor of the liver, with general functional derangement.

I had him taken to my stable, and put him under a course of mercurial and alterative medicines: he was also largely bled.

In the course of a month he got into tolerable condition, and was, after that, put in training, and won two races. He was soon afterwards again off his feed, and I was sent for; but, not being in the island, Mr. Hodges was called in, who recommended *beans* and *vetches* to be given. He then went to the Jersey races and won a race, and was brought back, all to pieces, and with a bad cough.

On auscultating the chest, I found the principal obstruction was at the larynx. I bled him largely—liquid blisters were rubbed on the thigh, and he was afterwards physicked.

The cough still continued, therefore I introduced a seton under the jaw. He was taken again to my stable, to have setons passed through the hocks, for there was some engorgement there. All did well. He was then put to grass by day, and taken in at night.

A few days after, he was exposed to a shower of rain. A trembling fit came on, but soon passed off when he was taken to the stable. Afterwards diarrhœa made its appearance, of black fæces, and had continued a few days, when I examined the rectum. It had a scirrhus feeling, with thousands of concretions, which could be detached by the finger and thumb. I cannot describe them more faithfully than by saying that they resembled dried mortar, with a yellow tint. I also felt one of the small intestines considerably enlarged, and the coats much thickened and hot, from two to three feet in extent. The dung was in a very liquid state.

On introducing Read's stomach pump, which I prefer to the pipe—for with the arm in the rectum it can be introduced into the colon seven feet and more, and if an assistant is not at hand I then tie the tube to the root of the tail—I found some of the concretions attached to the bulb of the tube, from which I concluded the colon was in the same state as the rectum.

The dung was now of a black colour, with a quantity of bloody mucus. From the manner in which he curved his back, I am led to think there is adhesion between one of the intestines and kidneys, for I have seen such symptoms in similar cases. I cannot, however, detect any albumen in the urine, which I believe is the case when that organ is affected: but I have detected it when that organ has not been affected, particularly after a hard day's hunt, or in dropsical affections. I have been in the habit of drawing off albuminous urine after violent exertion for twenty-five years. Before he had this attack he brought away large quantities of phosphate and carbonate of lime, as I have before described in *THE VETERINARIAN* for May 1840, for which I gave the same remedies as there named. This horse, to my knowledge, has never had the strangles.

I beg to submit to your examination a few of the extracted substances taken from the ulcers in the rectum. I have had them analyzed by a chemist, and the following are their different proportions: the sabulous deposit in the urine consists of phosphate of lime with slight traces of the carbonate of lime, and the small excrescences obtained from the intestines are portions of the ulcerated coat.



The first discovery of the complaint was on the 18th of September. The treatment has been as follows, viz.: local bleeding of the abdomen, vapour baths, opium, tartarized antimony, and calomel. This had stopped the purging, but the fæces still came away of a black colour, but which has slightly altered to a more brown one.

After the gut was cleansed with soapy water, I threw up an injection composed of treacle (for want of honey), oil, vinegar, and liquor potassii, mixed in linseed tea: it was immediately ejected; but since that time the ulcers are much smaller. The pulse at first was hard and about 20—now softer, 28. I submit this case to you, as I said at the commencement, because it is new, and deserving of notice.

As the gentleman who was first consulted says I am one of the old school, and know nothing of the new mode of treatment, I should be obliged if you would inform me if the above, and the following, are according to the new school. This is the same gentleman I alluded to in my answer to an old artillery officer, in *THE VETERINARIAN* for December 1840, p. 685.

Shortly after this I was sent for by Mr. Widdicombe, an experienced farmer, to see a horse, whose case he described to me as follows:—"Very stiff in his hind legs, scarcely able to move them—his tail erect—nose projected—and nostrils expanded. Saliva running from the mouth, which he could not open—and his eyes drawn into the sockets." "Why," said I, "your horse has locked jaw!" "To tell you the truth," replied he, "I called in Mr. David, and he told me the same; for I began to suspect Mr. — did not understand the nature of his disease, as he has attended three horses of mine attacked in different ways, all of whom he pronounced to be labouring under influenza. Mr. David tells me this horse must die too."

After much entreaty I went and examined the horse, and found him as he described, and the mischief occasioned by a deep-seated abscess by the side of the scapula. I dissected it out, applied nitrate of silver, and covered it with a linseed poultice. As the pulse was hard and wiry, I bled him—opened the bowels, and covered him with sheep's skins, with the other remedies usual in such cases. The horse recovered.

It appears that the first case he was called to attend was gripes; but the spasms had passed off before he came. The second was locked jaw, and he left medicine accordingly. The third was a case of gorged stomach, from eating chaff: this horse was very weak, and, in attempting to rise, he fell against the wall and bruised his eyelids.

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## RAPID PROPAGATION OF DOMESTIC QUADRUPEDS OVER THE AMERICAN CONTINENT.

[Extracted from Lyall's Geology.]

HUMBOLDT observes in his Travels, on the authority of Azzarra, that it is believed there exist in the pampas of Buenos Ayres twelve millions of cows and three millions of horses, without comprising in the enumeration the cattle that have no acknowledged proprietor.

In the Llanos of Caracoas, the rich haterahs, or proprietors of pastoral farms are entirely ignorant of the number of cattle they possess. The young are branded with a mark peculiar to each herd, and some of the most wealthy owners mark as many as fourteen thousand a year. In the northern plains, from the Orinoco to the Lake of Maracaybo, M. Depons reckoned that 1,200,000 oxen, 180,000 horses, and 90,000 mules, wandered at large. In some parts of the valley of the Mississippi, especially in the country of the Osage Indians, wild horses are immensely numerous.

The ass has thriven very generally in the New World: and we learn from Ulloa that in Quito they ran wild, and multiplied in amazing numbers, so as to become a nuisance. They graze together in herds, and, when attacked, defend themselves with their teeth. If a horse happens to stray into the places where they feed, they all fall upon him, and do not cease biting and kicking until they leave him dead.

Hogs, sheep, and goats, have likewise multiplied enormously in the New World, as have also the cat and rat, which last has been imported unintentionally in ships. The dog, introduced by man, and which, at different periods, became wild in America, hunts in packs, like the wolf and jackal, destroying not only hogs, but the calves and foals of the wild cattle, and even destroying horses.

The rapid propagation of domestic animals over the continent of America within the last three centuries only is a fact of great importance in natural history. The extraordinary herds of wild cattle and horses which overran the plains of South America sprung from a very few pairs first carried over by the Spaniards; and they prove that the wide geographical range of large species on great continents does not necessarily imply that they have existed there from remote periods.

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## A TUMOUR AND SPASMODIC STRICTURE IN THE ABDOMEN OF A HORSE.

*By Mr. JOHN YOUNGHUSBAND, Greystoke, Cumberland.*

BEING a constant reader of that truly valuable Periodical, THE VETERINARIAN, and having derived much useful information by means of its publication, I am induced to contribute my mite towards its advancement; at the same time wishing it, in despite of all opposition, the success which a work so truly valuable deserves.

The subject of this case was an aged cart mare, the property of a Mr. H. in my neighbourhood. In the month of May last she was attacked with what was supposed to be flatulent colic. I was requested to attend her without loss of time. When I arrived she appeared to be suffering great and acute pain, frequently turning over and over, and, at times, lying upon her back. The pulse was quickened, but rather small, and she had cold ears and legs. I immediately bled her, administered an anodyne mixture, and threw up an injection which in the course of half an hour completely relieved her.

June 22.—I was summoned to attend her again, as she appeared to be very ill, often getting up and lying down at short intervals. When I arrived, I found her with all the symptoms attending her as before; also the conjunctival and Schneiderian membranes much reddened. The same kind of treatment was had recourse to as before, and the result was as satisfactory.

From this time until the 24th of August she had frequent but slighter attacks, but the race not being considered desperate, my attendance was not required. On the 4th of September I was again sent for in great haste, as the owner thought she would be dead before I could arrive. The symptoms were the same as before, but evidently much worse. I immediately abstracted four quarts of blood (more could not be taken, for she would have fallen), gave her a draught of *sp. æth. nit.* and *tr. opii* in a pint of warm gruel, and threw up an injection of soap dissolved in warm water. As she was perspiring very much, I had her well rubbed by two men, one on each side, by which means she eventually recovered, contrary to the expectation of the owner and his men.

On the next day I was desired to attend her again, when all the former symptoms presented themselves in a more aggravated form. After having used the usual means to relieve her, and doing so in part, I began to suspect that there was some obstruction in the intestinal canal (although at times the mare passed



her fæces freely); and before I left her I communicated the same to the owner, desiring him, that, in case she died in my absence, they would not open her until I came; so I left her with a supply of anodyne medicine to be given her if necessary. On the evening of the same day, the owner came to tell me she was dead, after suffering the most severe pain, and, at times, appearing quite delirious.

*Post-mortem appearances.*—After laying open the abdominal parietes, I began my examination at the rectum, and, as I suspected, so I found the case to be. About a foot from the rectum, there was a stricture of the bowel, nine inches in length, much thickened, and containing no fæces. Farther on was another stricture of the same kind, but longer and more corrugated. This stricture was so narrow, that I could not pass my fore-finger into it. After slitting it up, there appeared many ulcers on its inner surface, each of which would contain a small pea. The intestine was much enlarged above and below each stricture, and contained fæces of the natural consistence.

Continuing my examination, my attention was attracted by a large fleshy substance adhering to a portion of the intestine about a foot in length, and which portion of the bowel was considerably dilated, but contained no fæcal matter. It had a gristly appearance, and, like the stricture, had small ulcers upon its inner surface. The tumour was composed of a fleshy substance, mixed here and there with fatty matter, and weighing nine pounds. All the viscera of the abdomen were in a high state of inflammation, even bordering on gangrene. The lungs were in a healthy state, but the liver was much softened, and the heart enlarged.

## A SINGULAR CASE OF ABORTION IN A COW.

*By the same.*

I WAS called to attend a cow, the property of a farmer a few miles distant from my residence, and that was expected to be near her full period of utero-gestation. When I arrived I found her standing, with her back up, and straining very much, shewing evident signs of acute labour-pains; and, at the same time, there was a small portion of the placenta making its appearance. After well oiling my hand and arm, I proceeded to examine the vagina and uterus, and succeeded, with very little difficulty, in extracting a dead fœtus that was lying across the mouth of the uterus, and had thus delayed the process of parturition. It was

small, and in a high state of decomposition. The placental membranes also came away at the same time. After the cow was thus relieved, she began to feed as vigorously as in a state of health, requiring only the attendance usual on such occasions.

The most remarkable feature in this case is, that the cow, three days before I was called in, shewed an earnest desire for the bull, and the usual connexion took place, the owner concluding from this symptom that she was not in calf. Immediately after this sexual connexion her labour-pains commenced, and continued, with slight remissions, until I relieved her.

I wish to know whether the fœtus, in this decomposed state, irritated the lining membrane of the vagina, and became the cause of this œstrum; and whether copulation was the cause of the parturition that immediately followed.

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[We are thankful for this communication. It is, we believe, the first of the kind on record; but it has occurred in many dairies. The fœtus being dead, and in the act of decomposition, the uterus would be in a diseased state, although not sufficient to subdue or prevent the process of œstrum. The gratification of that œstrum would, however, rouse the sub-acute irritability of the uterus, and the fœtus would be expelled. Several of our correspondents could furnish us with cases in point.—Y.]

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## A CASE OF DRY CANCER IN THE TONGUE OF AN HEIFER.

*By Mr. W. REDDALL, V.S., Plymouth.*

ON perusing last month's VETERINARIAN, I was struck with the novel and interesting communication from Mr. Hollis on a disease of the tongue of a heifer. His views, in my opinion, are correct as to the nature of the disease; but I think, Mr. Editor, from your reply, you were not quite correct in your conclusions: I say so, from your recommending the part to be well laid open; but if I read Mr. Hollis's description of the disease correctly, it was not a case in which such a procedure was indicated. In due deference to your judgment, Sir, I am led to differ from it, in consequence of observations I made on a similar case that occurred in my practice a few months since; and as none of us can boast of infallibility of opinion, I am sure, Mr. Editor, you will

take it in good part. If you think the subjoined remarks worthy of insertion in your valuable Journal, they are at your service.

It was in the month of April last, when the cattle epidemic was at its height in this neighbourhood, that I was sent for, a few miles from hence, to see a two-year-old heifer, which the owner apprehended was attacked with the prevailing disease; and on my first entering the shed where she was, I was of that opinion: but as I always like to make a scrutinizing examination before I commit myself, I proceeded to examine the mouth, from which the saliva was drivelling in abundance. She was much emaciated, the carcass tucked up, but there was no soreness of the feet, nor was there any fever, the pulse being in a natural state, both in frequency and fulness—the nose also was moist. On opening the mouth, the cuticle of the tongue and the buccal membranes were in a sound state, neither abraded nor ulcerated; but the entire structure of the tongue was in one complete state of scirrhus and induration throughout: to use the owner's familiar expression on my pointing it out to him, it was as hard as a board, and much larger than usual, the mouth scarcely being large enough to contain it. I must confess I was somewhat staggered at first, never having seen a case of the kind before; but, on reflection, I considered it of a scirrhus chronic nature, and intimated to the owner my fear that the case would be a fatal one. As it was a favourite pet animal, and had been given to the owner a short time before, he was very anxious that I should proceed with some kind of treatment; I therefore freely and deeply punctured the tongue in eight or ten places with my lancet, yet nothing flowed from the incisions but a little venous blood. I also inserted a seton under the lower jaw, and gave small doses of calomel and sulphur twice a-day, until the bowels were slightly relaxed, dressing the seton daily with the compound unguent of tartar emetic and hellebore, which I have generally found produce active suppuration in cattle. As soon as the bowels responded, I gave small doses of hydriodate of potash daily, and applied solutions of nit. potassæ to the mouth, ordering her to have bran mash and sliced turnips as diet, which she ravenously tried to devour, but could not masticate. Her tongue was so hard and stiff, that she could scarcely move it in any direction. Seeing this, I ordered her to be frequently drenched with gruel; but in spite of all my attempts, every visit I paid her, which was usually every second or third day, I found the disease increasing, and my patient becoming more exhausted; until one morning, after I had had her under my care about a fortnight, the owner found her dead and cold.

On examining her after death, all the viscera were in a perfectly normal state, both of the chest and abdomen: none of the other



granular structures were at all diseased; but the tongue was indurated and dry throughout; in fact, it was almost petrified: no fluid existed in it of either serum or pus. I am inclined to say it was a dry cancer, and must have existed some considerable time.

Should I have any case in future in my practice worthy of insertion, I shall be always at my post. Wishing your Journal more extended support,

I am, &c.

## A CASE OF RUPTURE OF THE POSTERIOR AORTA IN A BLIND MARE, AND SINGULAR STATE OF THE EYES.

*By Mr. T. SWARBRICK, V.S., Skipton, Yorkshire.*

ABOUT eight o'clock A.M. on the 21st September, I was called to attend a blind post-mare, the property of Mr. Bradley, of the Devonshire Hotel here, the man saying she was griped. I went immediately, and found her rolling about, sweating a little about her neck and flanks, and, if kept up, pawing with her off fore-foot. The pulse 65, and small. She had been off work a few days, on account of a crushed heel, and had been turned out in the field.

I administered the common gripe mixture, the ol. lini, tinct. opii, and sp. æther. nit., and ordered her to be well cleaned over.

9 A.M.—Much quieter. Pulse 85, but quite imperceptible at the jaw.

I began to suspect some intestinal lesion, and that the case would terminate fatally.

11 A.M.—Much worse. Rolling about, and beating her head against the floor and manger. I gave a draught of tinct. opii in a little warm water, and she drank some chilled water. Pulse small, intermittent, and about 90.

Half past 12 P.M.—Has fallen twice, and appears likely soon to die.

Half past 1 P.M.—Dead.

*Post-mortem, 2 hours after death.*—The thoracic viscera perfectly healthy. The stomach and intestines contained little food, and appeared quite free from disease. The cavity of the abdomen was filled with blood, partly fluid, and one large clot about twice the size of an ordinary pail. I examined carefully for the lesion, and, to my surprise, found the abdominal division of the posterior aorta ruptured, about one inch posterior to where are given

off the emulgent arteries. The opening appeared lacerated, but I could not trace any symptoms of previous disease.

The mare being blind, led me to examine her eyes. I found in the near eye the crystalline lens of a cartilaginous texture, not adhering to the capsule.

On removing the off eye, I found the posterior part very much pitted. The anterior chamber was filled with aqueous humour; the lens was of a cartilaginous texture, and, to my surprise, the posterior chamber filled with an osseous deposit, giving the pitted appearance to the part.

Not being able to account for the ruptured aorta, I am quite at a loss to what cause to attribute the lesion, as she had not been at work or irritated in the least, that I could learn; and not being quite satisfied as to the osseous deposit being the cause or the effect of the blindness in the off eye, I should be much obliged to any of your readers for their opinion, not having seen or heard of the like before.

The above is quite at your disposal, if you think it worth inserting in your valuable Journal, which I trust will be continued with the same spirit and kind feeling as formerly.

## ON STRANGULATED HERNIA.

*By* CHARLES JACKSON, *Esq., V.S. to the 8th Regiment of Light Cavalry, Madras.*

Dear Sir,—As “Strangulated Hernia,” when it does occur in England, is most likely to be found among horses of great value, and as it is of frequent occurrence in this country among our cavalry horses, a decision on the following point is, I think, of sufficient importance to warrant my requesting you to give this communication a place in *THE VETERINARIAN*.

Should the testicle on the side affected be taken away by means of wooden clams in every case of strangulated scrotal hernia? I am inclined to think that it ought in every case. It is, I believe, generally done when the hernia has been reduced without dividing the stricture; but, when the stricture has been divided, it is, I believe, generally supposed that, from the effects of the operation, the ring will be sufficiently closed, and that, consequently, there is no necessity for taking away the testicle. This, however, is rather doubtful, as the following case will shew:—

About this time in 1838, Mr. Chester, the veterinary surgeon, operated on a horse belonging to an officer of the 8th regiment of

Light Cavalry, for strangulated scrotal hernia. The stricture was divided with a bistoury in the usual way, and, after a very severe attack of peritonitis, the horse, eventually, perfectly recovered.

On the 13th of this month I was sent for, early in the morning, to see the same horse. I found him lying down, blowing very much; a watery discharge running from the nostrils; no pulse perceptible at the jaw; and a strangulated hernia on the off-side, the same side on which he had hernia three years before.

The horse was supposed to have "the gripes" in the evening of the 12th, and had been trotted about for some time. A farrier was then sent for, who detected the hernia, threw the horse, and attempted to reduce it. Thinking that he had succeeded, he let the horse get up, but soon found it necessary to throw him again: this he did three times. After this rough treatment, and the length of time that a portion of intestine had been incarcerated (about ten hours), the poor brute had but little chance: however, I operated as quickly as I could, and returned into the abdomen, after dividing the stricture, about three inches of very black intestine; but it was too late, as the horse died the same morning.

I am, &c.

## TAPE-WORM IN THE POINTER AND SPANIEL.

*By Mr. T. M. RAYNOLD.*

ON an estate where a great quantity of rabbits are annually destroyed in the month of November, I have observed that several dogs, that were previously in good health and condition, soon became weak, listless, and excessively emaciated, frequently passing large portions of the tape-worm. This induced me to examine the intestines of several hares and rabbits; and, with very few exceptions, I found each to contain a perfect tape-worm, from three to four feet in length. I then caused two of the dogs, whose cases appeared the worst, to be separated from the others, feeding them on potatoes, &c.; and in eight or ten days, after voiding several feet of the worm, they were perfectly restored to their former strength and appearance. The vermicular disease, hitherto so formidable to the spaniel and pointer, may, therefore, in a great measure, be fairly attributed to the custom of giving them the intestines of their game, under the technical appellation of "the paunch."

The facts above stated, in explaining the cause of the disease, at the same time suggest the remedy.



## A CASE OF SPINA VENTOSA.

*By M. LECOQ, M.V., Bayeux.*

IN the month of May 1831, a mare was brought to me from the President of the Board of Trade at Bayeux. He told me that he had consulted two of my colleagues on the case, and that they had both informed him it was beyond the researches of art.

I attentively examined her. A considerable tumour appeared on the middle of the interdentary region, towards the inferior and posterior border of the left branch of the maxillary bone. It projected very slightly externally, but it filled by its internal projection almost the whole of the intermaxillary space. A fistulous opening was evident, taking a straight direction, and giving vent to a purulent sanious matter of an infectious smell.

Having opened the wound so as to admit of the introduction of my finger, I found that the surface of the bone was denuded from above below two inches in length, and one in breadth. It seemed to me to be a species of necrosis. In the centre was an opening, into which I introduced my finger. I found a large cavity, some portions only of the walls of which I could touch, while portions of it were evidently carious. The greater part of it, however, was covered with a cellular membrane, in some places thickly set with fleshy growths, while there were depressions of different sizes, having some analogy to the anfractuositities of the cranium.

Having examined the interior of the mouth towards the middle part of the bars corresponding with the tumour, I observed a fistula communicating with a portion of the diseased bone.

I warned the proprietor of the seriousness of the case, and did not dissemble that I had little hope of success. Considering, however, that the mare was otherwise useless, I consented to operate.

On July 19th, 1831, I had her cast, and her head held conveniently by the aid of an assistant. I cut away the flesh, so as to bring the denuded portion of the bone better under inspection. I then cauterized the bone severely by means of a long piece of iron brought to a white heat. Having enlarged the opening which communicated with the interior of the osseous tumour, I ran the button firing-iron, brought also to a white heat, over every part I could get at, and until I judged that I had disorganized the internal surface of the shell. The mare was then freed and led to the stable, having green meat for food, with good

gruel, and ordering the cauterized part to be well washed twice every day with an emollient lotion.

21st.—The wound had suppurated afresh, and diffused an odour *sui generis*. Some portions of bone also escaped. By the introduction of the finger it was ascertained that there were other pieces of bone that were beginning to be moveable. The animal fed better, and masticated her food with greater ease. I prescribed, in order to cleanse the wound, a lotion composed of one part of the chloruret of the oxide of sodium and twelve parts of water. Injections of a solution of aloes were thrown up, and the same regimen was continued.

Aug. 9th.—Some dead bones had fallen from the wound, and by the aid of pincers three large pieces had been extracted.

15th.—The wound was sounded anew. On the superior part of the mouth was some exposed bone, presenting a surface of an inch and a half across. The inferior part, corresponding with the neck of the maxillary bone, at the height of the union of the two branches, offered a smooth and polished surface, with the development of vascular and fleshy granulations. The fistula communicating with the interior of the mouth was cicatrized. The same mode of feeding was continued, but, in spite of my advice, she was sent to draught work.

22d.—She is sadly suffering, and eats little, and with difficulty. The carious bones are now all uncovered: a new cauterization was practised. Emollient lotions were ordered, and repose insisted upon during the next eight days.

Sept. 1st.—The mare is in good spirits, and feeds well. Tincture of aloes was applied to the wounds, and she was again, contrary to my wishes, sent to work.

20th.—Some portions of the cauterized bone being examined with the fingers, appeared to have acquired a little more mobility. The opening of the wound being enlarged, I easily drew out two large fragments. I remarked, at the bottom of the wound, a surface that was very tender. All the osseous parts appeared to be well covered with fleshy granulations, and we perceived only that the bones that were taken away had left exposed almost the whole of the root of the first molar, and the inferior extremity of the second, so that the first tooth had nothing to support it except the surrounding fleshy substance. A pressure made upon it by the fingers gave it a certain mobility. The bony shell had quite disappeared.

Oct. 1.—The wound looks well, and the pus is of a good character. Its extent is much diminished. There is an exudation of osseous matter, which forms a species of calculus, and has

begun to cover again part of the roots of the molar teeth that were exposed.

*Nov. 15.*—There remains only a little fistula. The calculus has made so much progress, that the interval between the two branches of the maxillary bones is scarcely detectable.

*Dec. 1.*—The wound is perfectly healed, and the animal is gone to full work. In the month of May the proprietor sent her to some good pasturage, where she might be prepared for sale. I had occasion to see her at the time of sale. The tumour formed by the calculus had much diminished, and only a very slight deformity remained. The two first molar teeth had acquired their normal solidity, but the two portions of the maxillary bone had not yet become solid. There is reason to believe that the mastication of dry food is still difficult.

Of the causes of this disease I am altogether ignorant. It seems to be one of the consequences of neglected or ill-treated strangles; at least, I have seen affections after strangles that bear considerable resemblance to this.

I hope that the relation of this case may throw a little light on an affection, which to the present day has only been cited, so far as I am aware, by Hurtrel d'Arboval, and of the treatment of which he says almost nothing.

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## THE VETERINARIAN, NOVEMBER 1, 1841.

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*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

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It is rarely that we have approached our Leading Article with greater reluctance. We are just separated from an Association with which we have cordially worked several years, and in a cause that must be ever dear to us,—the honour and welfare of our joint profession. It would appear, from some portion of the farewell of our excellent Secretary, as if we did not part quite good friends. He wrongs us there; and although, in his peroration, there is, with one exception, scarcely a kind word, or the slightest reference to *THE VETERINARIAN*, we will tell him that we look back with much pleasure on the connexion that has subsisted between us; and ardently trust, that, although we shall in



future pursue somewhat different paths, our object will be the same, and our mutual respect undiminished and unfeigned.

As to the probable consequences of our parting, we feel no regret. Mr. Friend, in his invaluable paper in the beginning of the Number, has set us all right there. The meetings of the Association—the amalgamation of the practical man with the learner—the debates which include the opinions both of practitioners and students, while they may be rendered pleasing to the former, and not useless to either, will be more beneficial to the latter than any other way of acquiring the same information; nay, we have no objection to—we rather see the advantage of—publishing separately the records of the proceedings of the Association. Perhaps we would not absolutely forbid their extension beyond this boundary, and yet we should not be sorry to find that they did not extend farther, for the reputation of our profession has somewhat suffered by the promulgation of the errors of the student. We may be able to separate the wheat from the chaff, but every reader has not that power.

The last session, it must be acknowledged, was unfavourable to the improvement of our art, or the reputation of our meetings. Why was this? Who was here to blame? It was the almost unavoidable consequence of circumstances that had occurred out of doors. The unfortunate Circular of Professor Sewell was the main cause of the evil. When that Circular was rapidly and to a fearful degree interfering with the respectability and even the subsistence of the country practitioner—when a veterinary surgeon of the standing and character of Mr. Friend confesses that “he lost the attendance on at least 300 cases that he might fairly have calculated upon in the ordinary state of things, and that during the late epidemic among cattle, in loss of milk, loss of condition, and loss of life, the great body of farmers throughout England were sufferers to a much greater degree than they would have been if they had been left to have called in their own veterinary surgeon, as they most probably would have done, but for this unjust interference,” we cannot wonder that veterinary practitioners, every where, looked around them with indignation and disgust, and began to feel some strange antipathy towards the author or authors of all this evil.

A great many traced it to the right cause,—the Circular of the Professor,—“the only document of the kind which exists in veterinary medicine, and one to which the records of human medicine contain nothing similar.” Others, however, traced it to the diffusion of the knowledge of sheep and cattle medicine among the farmers by means of certain publications, and among the rest, and most of all, through the agency of THE VETERINARIAN, and, as stated in former numbers of this work, peripatetics were dispatched all over the country to put down the sale of this obnoxious and abominable publication.

Mr. Friend kindly and truly says, that he “exonerates THE VETERINARIAN from all blame in the transaction.” THE VETERINARIAN had, for many a year, found its way to every part of the kingdom, and no accusation of the kind had been successfully brought against it: but the charge was *synchronous with the circulation of Professor Sewell’s Circular*, and with that alone. Such, however, was the belief, real or pretended, of many practitioners, and of the friends of the Professor, and one simultaneous effort was made, but fruitlessly so, to destroy its reputation or limit its sale. This happened towards the conclusion of the session before the last.

In due time the students returned to the metropolis, and many brought with them the full determination to oppose themselves, in every possible way, to the diffusion of veterinary knowledge, except among a certain class. The meetings of the Association commenced, and the discussion of the first night promised fairly with regard to the future season. But what quickly followed? The system of exclusiveness developed itself in full force. The students entered as members of the Association, and on each succeeding Tuesday they occupied their respective places in the Theatre, yet only from a very few could scarcely a word be elicited. At the close of the debate, the silent ones betook themselves to a certain public house or tavern, and there fully entered into the subject, and discussed it in their own way. Here was the fatal blow to the improvement of the student during that session. Here was the sad answer to the question which the Secretary asks, “When will the metropolitan members of our common profession give us their oft-solicited presence at our meetings?” Never, while such

was the contumely that awaited them at the Theatre. Never, perhaps, with the cordiality which they would otherwise have evinced. The meetings, at that period of the session, met with the fate which they merited.

The Secretary then turns to an individual who cordially respects him, who has identified himself with him in all the most important objects to which the Association could be devoted, and whose best wishes will ever attend the progress of the Society. But could he be expected to expose himself to insult and danger? Is he to be taunted as a worthless book-maker? Is he to behold—not to cow before—the threatening glances of foolish yet well-meaning young men? Should it be necessary to warn him against causeless exposure to danger and the possibility of Lynch law? Is he, when he happens to enter the Theatre a little before the President, to be assailed with caterwaulings which almost tempt him to believe that the Lynch law is about to be carried into execution? This surely is sufficient to justify him in ceasing to mingle in the debate, and even to refrain from again making his appearance in the Theatre.

I speak not of the officers of the Association; I have ever found them honourable and kind. I speak not of the body of the students. I speak of those who have been misled. The evil that has accrued to the Society has been attributed to a somewhat wrong cause.

I have no fear with regard to the ensuing session. Let the object be simply improvement in science, and the cultivation of kindly feelings among ourselves, and none of the prior assemblies of the Association will exceed those which are to come in pleasure or in usefulness. No one shall be found more earnest in this pursuit than the writer of the present article.

We now turn to our highly esteemed and valued correspondent Mr. Friend. His suggestion, with respect to legal transactions, is a very important one, and most cordially should we co-operate in the accomplishment of it. Will our metropolitan and country friends favour us with an account of every horse-cause in which they may be engaged, or which occurs in their neighbourhood? A very important and useful series of facts would be elicited; and the members of our profession would be exempted



from annoyance and persecution. The series of "Popular Errors connected with our Profession" will be gratefully received.

We most readily insert the communication of Mr. Raddall. He will oblige, and not offend, us by communications of this kind. We, however, when we are a little more at leisure, shall have a few words to say on the subject.

## R E V I E W.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

### THE NATURALIST'S LIBRARY, VOL. XII.

*The Natural History of Horses—The Equidæ, or Genus Equus of Authors. By Lieut. Col. CHARLES HAMILTON SMITH, K.H. and K.W., F.R. and L.S., President of the Devon and Cornwall Natural History Society, &c. &c.*

WE resume our review of this interesting volume, and more particularly so, in consequence of an error into which we were inadvertently led in our first notice, respecting the discovery of fossil horses in North and South America, wherein we supposed the author to be unacquainted with this interesting circumstance; for on a more attentive perusal, we find it noticed in a Note, page 68, but with some doubts as to those remains which were discovered by Mr. C. Darwin, belonging to the true equine debris. There can, however, scarcely be a doubt on the subject. Mr. Darwin writes very confidently, and describes the Pampas of Southern America as being the great sepulchre for these remains. In a short essay on "the fossil horse," which was published in THE VETERINARIAN by ourselves in the early part of this year, we noticed some horse-teeth found at the Big Bone Lick, and now in the interesting museum of Mr. Saull, Aldersgate Street, London. The author too, in a memorandum, notices the same fact, which proves the existence of equidæ in North America during a former zoology.

We are contented to leave this subject, and follow our author to another part of this highly interesting volume.

The differences which exist between horses of the different re-

gions of the globe are so striking, that they must have attracted the notice even of superficial observers; and a very interesting question arises out of these differences,—Have they descended from one common stock? or must we trace them to more than one? and if so, how many species must we admit? These questions belong to the domain of natural history and physiology, and are particularly interesting to the veterinary student. The phenomena are capable of solution in two ways. Either different kinds of horses were originally created, fitted to inhabit the different countries wherein they were placed; or one kind only was formed in the first instance, and then we account for the diversity that is now observable, by the agency of the various physical causes to which they have been subsequently exposed, and in which case they will only form different varieties of the same species.

The author inclines to the former opinion, and imagines that the domesticated horse, in the form we now have him, never existed in a wild state. He considers it more probable “that osculating forms existed *ab initio* distinct, circumstanced to accomplish certain ends, such as the service of man, and therefore framed so as to render them fusible into one species.” He is also of opinion that great changes have been produced by the intermixture of hybrid blood, particularly in colour and covering; and he even imagines that a very superior domestic animal, little inferior to our present horse, might be manufactured, even now, out of the quagga, the zebra, and the dauw. “We do not,” he says, “as yet know the limits of what constitutes a *genus*, nor have we a satisfactory definition of species, since it is admitted that hybrids, derived even from assumed distinct genera, are not without the power of procreating a fertile offspring with either of the parent species, if not among themselves; thus implanting new forms and new characteristics in a progeny, which may again and again receive additional blood of the foreign stock with the more facility, since the hybrid conformation is already prepared for further adulteration; and, notwithstanding the known tendency to sterility, obliterate specific distinctions, and form a homogeneous race.”

We shall proceed to consider these opinions in a slow and humble, but sure method of observation.

On attempting a sketch of the natural history of any animal, our first efforts are necessarily directed to its immediate origin; and in this instance it would be particularly interesting to be enabled to trace the exact genealogy of one that is now become our constant companion and most faithful friend. The author has clearly shewn, that native breeds of wild horses are still found in various quarters of the world, most of which present one common character; and when, in addition to this, it can be satisfactorily shewn

that Ferol horses that had once been reclaimed and made tame, but which from circumstances had again become wild, had in their future progeny assumed a form and character approaching to the original wild breed, one would suppose that these facts alone would be sufficient to prove that the horse had a claim to a pure original formation, as much as man himself.

An interesting paper was read some time since by M. Roulin to the Academy of Science at Paris, on the changes which the domestic animals undergo when transported to the equatorial regions of the new world. The hog, in the warm valleys of South America, wandering in the woods and subsisting upon wild fruits, becomes ferocious and assumes almost the character of the wild boar. In St. Domingo and New Grenada the cow undergoes a material change. It no longer furnishes the supply of milk which we obtain from it in Europe; for when the calf ceases to suck, the milk immediately dries up. Lastly, the horses multiplied in such an extraordinary degree shortly after the first settlement of the Spaniards that it required the united testimony of the aborigines and the evidence of the terror they at first excited to establish the absolute credibility of their having been imported. These animals, as well as the pig and ox, have become wild, having entirely lost all marks of domesticity, and have in some measure reverted to the original characters of their species.

In dogs also we have excellent examples of the reversion to an original breed. In Cuba, Hayti, and in all the Caribbean Islands, they have become wild. "In the course of the seventeenth century," says Lyell, "they hunted in packs, and fearlessly attacked herds of wild boars and other animals." It is natural to inquire to what form they reverted? They are said by many travellers to have resembled very nearly the shepherd's dog; but it is certain that they were never turned into wolves.

These facts alone appear to me sufficient evidence to prove that the horse has from the creation existed as a pure, unmixed, and original animal; and it really does seem more rational to suppose that the powerful agencies of habit, food, climate, and domestication had been the cause of the different varieties, than to resort to the opinion that such varieties had been originally formed as were adapted to the spots whereon they have been placed. Every person who knows any thing of the history of animals must admit that great changes do take place in them from the long action of these causes. To these influences we must attribute the diversified appearance of the ox species. We have a singular but striking example of this in the different varieties dispersed over our own islands, where almost every district or county has its peculiar breed, which are generally distinguished by the name of the par-



ticular district where they are most prevalent, and which variety in most instances is undoubtedly the most proper and suitable to the soil.

In situations where they are brought from different parts of the kingdom, as at the London and Bristol markets, the different breeds appear, when contrasted, as so many distinct species.

“Long horned and short, of many a different breed,  
Tall, tawny brutes, from famous Lincoln levels  
Or Durham feed;  
With some of those unquiet black dwarf devils,  
From nether side of Tweed  
Or Frith of Forth,  
Looking half wild with joy to leave the North.”

In the different breeds of sheep, too, we have a striking example of the effects produced by pasturage, soil, and climate; and we might carry on the comparison to swine, and find in their diversified appearance in the various quarters of the globe the most extraordinary yet beautiful illustrations.

We have also some examples in the vegetable world, exhibiting this influence in a striking point of view. Thus the crab of the woods has been transformed to the golden pippin—the sloe into the plum: flowers have changed their colours, and become double, and their new characters can be perpetuated by seed. A bitter plant, with wavy sea-green leaves, has been taken from the sea side, where it grew like wild charlock, has been transplanted into the garden, lost its saltiness, and been metamorphosed into two distinct vegetables, as unlike each other as is each to the parent plant, the red cabbage and the cauliflower. These, and a multitude of analogous facts, are undoubtedly among the wonders of nature, and attest more strongly, perhaps, the extent to which species may be modified, than any examples from the animal kingdom.

With these instances before us, we must by analogy admit, in its full force, the agency of climate, &c. on the horse also, in producing many of those extreme disproportions in size, form, and colour, that we meet with or know to exist.

Having settled, we hope to the satisfaction of our readers, the question as to the claim of the horse to a pure originality of formation, we will proceed to consider another opinion of the author's, “that our present domesticated horses, in the form we now have them, were never really wild.” We are inclined to agree with him in this opinion; and the example which we have already adduced, in the change produced in our domesticated animals in form, colour, size, structure, and other particulars, is quite sufficient to shew that there is a capacity in all species to accommodate

themselves, to a certain extent, to a change of external circumstances, the extent varying greatly according to the species. But we shall find as we proceed that these mutations, thus superinduced, are not the effect of chance, as the author would lead us to suppose. The law of variety is not blindly or indiscriminately followed, but, in every instance, is intimately related to the natural wants and propensities of the species.

The true distinction generally considered between different species, is their incapacity of propagating with each other an offspring capable again of continuing itself by subsequent propagations. But our author is of opinion that we are not justified in assuming this as law, as it has been repeatedly proved that two species very nearly allied to each other will produce a hybrid offspring, and that the hybrid is again productive with an individual of the true specie of either parent.

Mr. John Hunter says, alluding to this subject, "that if it be true that the mule has been known to breed, and which must be allowed to be an extraordinary fact, yet from the copulation of mules being frequent, and the circumstance of their breeding very rare, he should rather attribute it to a degree of monstrosity in the organs of the mule which conceived, as not being a mixture of two different species, but merely those of either the male or the female. And this is not a far-fetched argument either, when we consider that some true species produce monsters with a mixture of both sexes, and that many animals of distinct sex are incapable of breeding at all."

This opinion of Mr. Hunter was formed from experiments made with the wolf, the dog, and the jackal. The dog, he found, would breed with the wolf and the jackal; and the mule in each case would breed again with the dog.

But be it observed, that in these experiments, as well in all others that we have heard of, there was always one parent at least of pure breed, and no proof was obtained that a true hybrid could be perpetuated; a fact of which no examples are yet recorded, either in regard to a mixture of the horse and ass, or any other of the mammalia.

The author appears to consider that it was in some such manner—perhaps from a cross with the *Hemionus Asinus* (a very superior kind of ass)—that the *Isabella* breed of horses and the *Eelback dun*-breed of Scotland was first established, having asinine streaks on the back, and cross bar-streaks on the joints and shoulders. We would here remark that, if it could be shewn that this breed of horses could not possibly have been produced in a more natural way, there would be some reason for agreeing with the author; but there is another way in which this might be

explained. In some experiments that were made by the Earl of Morton, and recorded in the Philosophical Transactions for the Year 1821, it is stated that he had bred a hybrid foal between a chestnut mare  $\frac{7}{8}$  Arabian blood and a quagga, which in form and colour bore decided evidence of a mixed origin. This was her first foal; but interest was most excited five years afterwards, when the mare being sold to Sir Gore Ouseley, he bred from her, by a black Arabian horse, a filly, and the next year a colt, by the same parent; which, although both were unquestionably  $\frac{1}{20}$ ths of pure Arabian blood, shewed strong marks of the anterior spurious commixture of the mare and quagga, in the character of the mane, the colour of the hair, and in the striped markings on the neck, shoulders, and joints. These facts were fully corroborated by the late Dr. Wollaston, and, it appears, likewise by Col. H. Smith himself. Portraits of the animals painted by the accurate Agasse are preserved in the Museum of Surgeons' College, London; and our author also has represented the first, second, and third produce of the mare and black Arabian in three well-executed engravings. In the last foal, the mane retains its quagga character as much as the first, and, in all, the streaks on the neck and back are more decided than even in the mule. Our readers may draw their own conclusions from this. We merely ask, hypothetically, whether the Isabella breed of horses might not have been originally produced in some such manner? If so, the fusibility of hybrid blood in this instance is out of the question. We are, however, inclined to believe that the primitive breed of horses were of the dun or cream colour, and, if so, then both arguments fall to the ground. Such was the Median race, best known by the name of Nisean\*; because, in the plain about Mount Corone, there was, in the time of Darius, an enormous hippobaton belonging to the government, whence the ill-fated monarch drew one hundred thousand horses to oppose the Macedonian invasion, and still left fifty thousand in the pastures, which Alexander saw in his march through that country. They were all, it appears, of a dun or cream colour, and were derived from the wild race further north, which is still of a similar colour, with an asinine streak down the back, cross bars on the joints and even on the shoulders; the muzzle, mane, tail, and pastern being black. Wild horses, by

\* Xerxes, in the Grecian expedition, was drawn in a chariot by Nisæan horses. Strabo also takes notice of them: he says, that they were used chiefly by kings, being the best and largest breed.

Ἀριστοὶς ἔστι καὶ μεγίστοισι.

The colour he also mentions as being of a dun or golden colour.

Εἰναι ξανθὰς πασος.



Oppian denominated *hippagré*, and by Pliny *equiferi*, are first mentioned by Herodotus, as being of a white colour, and inhabiting Scythia, about the river Hypanis, or Bog. He notices others in Thrace, beyond the Danube, distinguished by long fur. Leo and Marmol say that the colour of the African wild species is whitish ashy grey, with mane and tail short and crisped. In the woods and plains of Poland and Prussia there were wild horses to a late period. Beauplan asserts their existence in the Ukraine; and Erasmus Stella, in his work "*De origine Borussorum*," speaks of the wild horses of Prussia, as unnoticed by the Greek and Latin authors. "They are," he writes, "in form nearly like the domestic species, but with soft backs, unfit to be ridden, shy, and difficult to capture, but very good venison." These horses, says Col. Smith, are evidently again referred to by Andr. Schneebergius, who states that there were wild horses in the preserves of the Prince of Prussia resembling the domestic, but mouse-coloured, with a dark streak on the spine, and the mane and tail dark. These and numerous other places are mentioned by the author in his chapter on the wild horse—all tending to shew that, in most places where horses have been discovered in a wild state, their colour and markings approach closely to the Isabella breed. We certainly consider these remarks on the wild horse to altogether discountenance the opinion, that either the Eelback dun or Isabella breed owe their colour and markings from an ancient cross with Hemionus.

Ere we conclude our Review, we must notice an extraordinary opinion entertained by our author respecting the blending of different species into one homogenous race, which is at variance with all our knowledge of living nature. "We may assume," he says, "that civilized man, if it had been his lot to deal with the zebras of South Africa instead of the horses of Asia, in due time would have succeeded in amalgamating the three or four species now existing into one domestic animal, little inferior to our present horse; that the powers of draught would have been found in the quagga, the qualities of charger in the zebra, and the properties of mountain pony in the dauw. In the chapter on hybrids, the reader will find this subject fully considered.

It is very true, as we have pointed out, that unnatural unions take place in animals under the power of man, with the assistance of contrivance and stratagem; but we defy the author to produce a single authenticated case where a true hybrid race has ever been established. If it can be shewn that a single permanent species has ever been produced by hybridity, it might have lent some assistance to such wild doctrines. The fact of hybrids

proving prolific when crossed with individuals of pure species, by no means bears out the author's hypothesis, that a true hybrid race could possibly be permanently established between the zebra, the quagga, and the dauw. Had the Author of Nature allowed this fusion of species, the whole animal world, ere this, would have presented a scene of confusion; its tribes would be everywhere blended together, and we should find more hybrid creatures than genuine and uncorrupted ones. Why, the marvellous births of Virgil's air-born coursers is not more extraordinary and unnatural:

Ore omnes versæ in Zephyrum, stant rupibus altis,—  
Expectantque leves auras: et sæpe sine ullis,  
Conjugiis, verto gravidæ, mirabile dictu.

The very distinction of species implies a considerable difference in several respects, and proves that species have a real existence in nature. On looking through nature's vast and varied range, we observe the whole earth teeming with rational harmonies; but man,—ephemeral, laborious man,—in attempting to establish a permanently distinct species, by blending together a male and female of qualities and habits essentially opposed to each other, would, if allowed, very soon produce a race of monsters. Fortunately, the resistance of nature overcomes our feeble efforts, and

“Like a generous horse,  
Shews most true metal when you check his course.”

By studying attentively the peculiar character bestowed upon the different species, with their wants and peculiar habits, we shall have sufficient proofs of the error of such opinions as are advanced by the author. We need not say more; for on this great theme kind Nature keeps a school to teach her sons herself.

“Unerring Nature, still divinely bright,  
One clear, unchanged, and universal light,  
Life, fire, and beauty, must to all impart,  
At once the source, and end, and test of art.”

We again most cordially recommend this volume to the notice of our various readers, as a work that should be placed in the library of every student of nature.

K.

*Manual of Veterinary Homœopathy comprehending the Treatment of the Diseases of Domestic Animals. From the German of M. W.* London: Hurst and Bailliere.

No pains have been spared since our last publication to ascertain the name of the author of this work. We like to tell a man to his face what we think of him and his doctrines. We have not been able to obtain the slightest clue to the real authorship of the volume that we have undertaken to review. We will, however, take it for granted that this work contains the real opinion of the author with regard to the control of the system of homœopathy over the diseases of our domesticated quadrupeds; and we will endeavour freely and unreservedly to meet him on his own ground. The difference between our practice and his is this,—that while we apply certain remedies in order to subdue the existing malady, he seeks for a medicine the effect of which bears some analogy to the prominent symptoms of that malady. We inquire into the seat and the cause of the disease—he seeks for a medicine which will produce the veritable symptoms of the malady—a medicine destructive, probably, if administered in the usual dose, but destructive to the disease when administered in infinitissimal minute doses.

The 300 diseases over which the homœopathist assumes a perfect control are arranged alphabetically. We will take a rapid survey of the principal of them, leaving the reader, in a great measure, to draw his own conclusions.

The first that comes under notice is ABORTION, a too frequent evil in our sheep-folds and cattle-yards. To counteract this the *Arnica Montana* or *Leopard's Bane* is recommended, especially if the animal has had a fall or blow. The leaves and flowers of this plant, a native of northern Europe, are said to be narcotic, stimulant, and diaphoretic, and its root tonic and aromatic. It still maintains its place in the materia medica of some English writers, but it is seldom or almost never used. The French have almost discarded it from their list of drugs, but the Germans attribute to it wondrous power in a great variety of diseases, particularly in typhus and putrid fever, ague and palsy. The writer of this work gives a list of more than sixty diseases over which it has almost sovereign power.

*Toxicodendron* is recommended in cases of dislocation or strain; but the favorite antidote for abortion is *Camphor*, of which the following account is given:—

“A heifer two years old was often at heat, but had never conceived. On the 13th of December, 1824, she was again with the bull. I gave her  $\frac{4}{9}$  (40 drops) sol. camphoræ in three ounces of water. She conceived, and, in due time, produced a calf. I had



given her, during gestation, on the 11th of January, 1825,  $\frac{20}{6}$  (20 drops) of the sol. camphoræ, to prevent abortion."

He adds, "I cannot too much recommend some doses of savine to be given to gravid cows or sheep, when abortion in a certain district takes on an epizootic character."

Having remarked that, in a flock of 300 sheep, three or four mothers suddenly aborted, he says, "I immediately changed the alimentary regimen, and replaced the hay by dry trefoil, and the potatoes and oats by farinaceous drinks: but the abortions continuing, I returned to the former regimen. I poured 300 drops of savine into half a pint of water, and shook well the mixture, and turned it on 15 bushels of bruised potatoes. I added to this 15 bushels of oats, and distributed it every morning among the pregnant females. At the end of three days the abortions entirely ceased."

Here, at first glance it might appear that the irritable state of the womb was staid by the exhibition of these minute doses of camphor in the cow and savine in the sheep; but a moment's reflection will point out another and more likely cause, namely, the maturity of the cows, and the altered food of the sheep, with, perhaps, some powerful atmospheric influence.

A horse was much inconvenienced by a swelling that extended from the lower part of the belly to the back of the thigh. He ate little—his excrement was small and hard—his urine turbid—his breathing slow, and the animal, every now and then, drew his breath as though it would suffocate him.  $\frac{4}{4}$  (four drops of the 4th dilution) of Bryony, or each drop containing a hundred millionth part of the virtue of the first drop, given twice a-day, re-established him in a fortnight.

Under the title of LOSS OF APPETITE he states some curious circumstances. "A cow of 10 years old had lost her appetite. She was lively—did not cough—her eyes were bright, and her respiration normal; but she had eaten very little for 14 days, and remained whole days without tasting any food. Herr Lux gave her on the 9th of August 1834  $\frac{5}{6}$  (five drops of the first solution of) nux vomica. On the morrow she was better and drank a little. On the 12th, she ate with appetite. On the 17th, diarrhœa came on, and she again ceased to eat. Lux, proceeding on the homœopathic principle, had recourse to the rule of contrary, and gave her  $\frac{10}{6}$  (10 drops of the first solution of) rhubarb, which immediately stopped the diarrhœa: after this  $\frac{20}{6}$  of caraway completed the cure.

$\frac{5}{6}$  of nux vomica also restored a hack-horse which had long fed very sparingly, and had a feeble pulse.

$\frac{20}{6}$  of the same also restored the appetite of a goat eight years old, and which had eaten nothing for several days.

To this follows some cases of ASCITES. "Sixty beasts had

passed the autumn in a low and damp pasturage, and a great many fell ill. After killing one, I knew the affection with which they were attacked to be dropsy. I then made them take  $\frac{60}{2}$  of digitalis in a quantity of water sufficient to soak 50 pints of peeled potatoes that I had given to all the flock. At the end of fourteen days I destroyed one of them, that seemed at the beginning of this business to be more seriously attacked than any of the others, and I found no case of dropsy. I lost only the two beasts that were killed." The conclusion which he draws does not appear to be a strictly legitimate one; but we will pass on to others.

Mention has already been made of the power of *arnica* as a tonic and diaphoretic. It now appears as a styptic. "The castration of animals is frequently a dangerous operation. Hæmorrhage often attends it that is with difficulty arrested. Dr. Laville de Laplaigne says that *arnica* presents to the veterinary surgeon an inappreciable resource. He washes all the wounded parts with arnicated water in the dose of two drops to an ounce of water. He afterwards staunches them with compresses soaked in the same liquid. He then makes the animal drink, every two hours, a little water into which have been thrown two drops of the *arnica* of the fifth dilution. Where compresses cannot be applied, the parts are washed with this lotion frequently in the day. In spite of the employment of the *arnica* both externally and internally, fever sometimes supervenes after the operation; he then uses the *aconitum* with the *arnica* in doses of from 8 to 10 globules of the 10th dilution.

CATARRH is with us a simple disease, generally treated in a very simple manner, and yet efficiently. Herr Schmager gives a curious account of the manner in which he, a homœopathist, treats it. "From the onset I give generally one or two doses of *Aconitus Napellus* (wolf's-bane); I follow this immediately with a dose of opium, which I administer in the morning, fasting, and repeat it on the morrow. The nasal mucosities become then thicker, and the inflammation of the nose diminishes. At the end of three days, I almost always give  $\frac{8}{15}$  sulphur (!!), which stops the cough and the solution of mucus; but if the difficulty of breathing and the cough increase, I give sponge, briony, and chamomile, with success. If the disease attacks the head, I give the *napellus* and *belladonna*, and follow it up with *toxicodendron*. These three medicines have with me always proved sufficient. If the animal is dull or torpid, I administer opium, digitalis, and *arnica*.

"When the affection extends to the throat and the organs of deglutition, the animal swallows with difficulty, and its respiration becomes hard and noisy. Solid as well as liquid aliments can scarcely pass, and return often by the nose: above all, a painful

cough seizes the animal while he is eating. The remedies I employ in this case with the most success are the napellus aconitum, and more especially chamomile. I have often given a dose  $\frac{8}{15}$  of chamomile in the evening, and on the morrow the greater part of the symptoms have disappeared.

"I sometimes follow the chamomile with a dose of belladonna. This last medicine procures an evacuation of mucous matter, so abundant that the manger and floor are often covered with it. This flowing, when it evinces no character of malignity, I seek as much as possible to keep up by sponge and bryony."

COUGH.—Some horses and dogs have an inveterate cough, dry, hoarse, jerking, and sometimes so violent that the animal grows thin, and loses his strength and appetite. "I have remarked," says Schmager, "that one dose of cuprum almost always brought about an amelioration at the end of two or three days, and when repeated every morning it almost always determined a radical cure."

"Pigs often have a dry, hoarse cough; they eat little, and their dung is soft and liquid. From  $\frac{3}{9}$  to  $\frac{3}{6}$  daily will generally effect a cure."

DIARRHŒA.—"A calf," says Herr Kinder, "was attacked with diarrhœa. Its body was stiff, its eyes sunk in their orbits, the eyes swollen, and the mouth full of mucous matter. His excrements were whitish grey. I gave him  $\frac{3}{5}$  of rhubarb on the 20th of March, 1834; and on the 21st, the symptoms not having lost their intensity, I gave  $\frac{2}{15}$  of napellus. On the 22d there was slight amelioration; he began to suck, but the diarrhœa continued. On the morrow, however, he was completely well. I gave napellus, because, on the examination of the entrails of several calves that had died of the disease, I saw that the lungs and intestines were attacked by gangrene."

TUMOURS IN THE UTERUS.—"A mare of nine years old," says an anonymous writer, "fell ill. I found the thighs and teats slightly swollen—the vagina was also swollen, and she could not move her hind legs without evident pain. On examining as well as I could *per rectum*, I found that the womb was swollen, and that there were several elevations or soft tumours in it. I gave four globules of iron three times a-day, and at the end of fourteen days these tumours had disappeared without leaving the slightest trace."

DISTEMPER OF DOGS.—Dulness; the eyes dull and of a greenish hue. A white or green discharge from the nostrils, at first very liquid, but quickly thickening; swelling of the eyelids, and discharge from the eyes like that which flows from the nose; cough and loss of appetite. All these symptoms increase in intensity; the skin and ears and extremities become cold, and convulsions resembling those of madness, and often mistaken for



it, ensue. These increase; the muscles of the jaw become affected, and the lower jaw strikes violently against the upper. The dog frequently becomes blind, either from ulcerations in the eye, or amaurosis, and at length he dies in convulsions. Such is the description of distemper, much resembling the disease as it appears in our country.

When there is sickness and diarrhœa, the white hellebore is indicated; *nux vomica* when there is loss of appetite, vomiting, and constipation; *coculus* and *toxicodendron* when there is weakness or paralysis; *belladonna*  $\frac{1}{16}$  when the dog begins to stagger about; and copper when the convulsions actually appear.

GLANDERS.—*Asafoetida*, arsenic, chlorine, *belladonna*, and barytes, are the medicines most to be depended upon, and especially the two first in cases of farcy.

In GREASE the *melampodium* (black hellebore), is the most efficacious application. The eldest of four horses belonging to an officer was troubled with grease. Elixir of vitriol, &c. had been employed without success; the evil was only aggravated, and the disease was at length communicated to the other three horses. There were bluish cracks on the fetlock, which exuded a fœtid humour, and the limbs were excessively swollen. "I gave," says the author, "to each of these animals  $\frac{3}{4}$  of black hellebore three times a-day: at the end of 14 days they were perfectly cured."

BLOODY URINE.—Herr Kinder gives a singular case. "An ox," says he, "passed bloody urine. I employed in vain saltpetre, Glauber's salts, and other drugs prescribed in similar cases, but I administered at mid-day  $\frac{2}{30}$  of cantharides. On the morning of the next day at 10 o'clock I returned to see my invalid: his urine had taken the natural colour again. He ate better, was lively, and voided his urine and his dung without any appearance of pain.

RABIES.—Dr. Laville de Laplaigne has communicated the following observations. "On the 20th of December, 1836, a setter was bitten on the nose by a mad dog. Several other dogs bitten by him became mad. I was sent to on the subject, and I sent two flasks, of which *belladonna* (mother tincture), and the other *belladonna*, thirtieth dilution, were the contents.

The first was employed to bathe the sore twice a-day; dose ten drops in an ounce of water.

The second was administered internally, the dose being one drop every morning for several days. The wound having cicatrized, the animal had his liberty given to him, and shewed no symptoms of madness. "From this," says the doctor, "we may conclude that *belladonna* may be considered as a certain preservative." The doctor, however, is travelling a great deal too fast. We must have a great many more instances of the efficacy of the

belladonna, before we receive it as a certain preventive. Let us, however, attend to the second case.

On the 20th of March 1836, I was shewn 24 hounds that had been more or less bitten by a young dog that had gone mad without any known cause.

As soon as the whipper-in was aware of the mischief that had been done, he separated the others from him, and kept him securely in a place in which he died three days afterwards, having refused all kinds of food and drink, and having devoured the end of his tail and his hind paws.

As soon as this was known, the twenty-eight dogs were separated and fastened so that they could not bite each other, or those charged with their care. To each was given, for fifteen days, a drop of belladonna, thirtieth dilution, every morning, and the wounds were washed in the tincture, ten drops in a pint of water, until perfect cicatrization. After sixteen days all the dogs were set at liberty, and none became mad. Of the twenty-eight dogs, six only lost their sight. Of these six, five died without symptoms of hydrophobia, and the other was killed. The real meaning of this is, that in these five dogs the disease assumed that *peculiar sub-acute form* which has been characterised by the term *dumb madness*. The dog has little or no inclination to bite,—perhaps he is unable to bite; he cannot close his mouth, or retract his tongue: he pines away, and he loses his sight a day or two before death. Five out of the twenty-four died in this state. There was none of the rabid fury which sometimes appears, but the saliva was as poisonous as in the fiercest of them. The sixth dog, probably, exhibited the disease in its more frightful form, and was destroyed. The loss of six out of the twenty-four would somewhat impeach the credit of the medicine. Who can tell that more than these six were bitten? It is a tolerable proportion: it is more than the average number, when a rabid dog is occasionally found in our stables. Besides, there is a great carelessness in the narration. The number of dogs is at first said to be twenty-four,—presently they increase to twenty-eight. Which was the true number? We must have more care taken in the detail of the facts, before we can put any confidence in these supposed homœopathic remedies.

At some future period, we may, possibly, resume the subject; but, at present, we conclude with an extract from the "*New York Journal of Medicine*," as quoted by "*The Lancet*" of April 1840.

"The minuteness of the homœopathic doses, recommended in certain works, precludes all belief in the results attributed to them, and is sufficient, opposed as it is to all known facts, to warrant a rejection of the whole system. Cases of the minute division of matter, as proved by chemical tests, are irrelevant and inconclu-

sive, as arguments to support the doctrine. The question is, how small a quantity of a medical substance will affect the organism? Neither does the fact, that a very minute quantity of vaccine or variolous matter affects the system prove any thing in favour of the efficacy of minute doses of vegetable or mineral substances; for the former are specific poisons, producing specific results, which is not true of the latter. The leading homœopathists of the present day speak of the decided effects of the decillionth dilution. The lowest dilution that can usually be obtained from these gentlemen is the *third*, which is very nearly in the proportion of one drop of the original tincture to one barrel of alcohol, or one grain of the extract to 400 weight of sugar. Some of them often profess to use the 30th dilution. Let us try a little arithmetic here. The seventh dilution of one drop will be found, by any one who has the patience to work out the problem, to be one hundred millions of barrels; and if he went on to the 30th dilution, there would be needed, if all were preserved, a quantity of alcohol that could only be expressed by sixty consecutive cyphers,—a quantity of alcohol larger than the whole solar system, in order sufficiently to dilute the menstruum. If sugar was used instead of alcohol, the *third* degree of potence would require more pounds than a man could carry,—the *fourth* would freight a north river sloop,—and the sixth our whole navy.

If it be said that homœopathic medicines are not often given in these doses, we reply, that such are the doses recommended by homœopathic writers—such are the doses recommended in the book we have been reviewing. They were ordered for the dog supposed to be rabid; they were afterwards recommended for staggers.

## ON TUBERCLES IN DIFFERENT ORGANS.

By M. LUGOL.

[Delivered at the Hospital St. Louis.]

THE cause of tubercles in various organs of the human being, and in the brute, is a subject wrapped in the deepest obscurity, and especially during the first period of its existence in both. When tubercles exist in the subcutaneous tissue, the mere local examination of the part will convince us of their presence; but they may exist in parenchymatous organs without their existence being revealed by any external symptom; or, if they are discovered, it is at an advanced period of their existence, and when the malady has so far advanced that the resources of art are no longer available.

When pulmonary tubercles are suspected, we avail ourselves of the aid of auscultation or percussion; but in many cases auscultation and percussion remain mute even when there are



numerous tubercles disseminated in the tissue of the lungs. At other times the resonance of the thorax is every where normal; the respiration is perfectly natural; and, guided by these data, we conclude that there are no tubercles in the lungs. When, however, we inquire more carefully into the case, we find that some of the breed have died of phthisis, or they have had swellings about the jaws or other parts, or their health has been delicate, or their growth has been stunted, and ultimately we find that the lungs contain tubercles, although auscultation is powerless to demonstrate their presence. Tubercles are manifestly hereditary; and whenever they exist in one parent, the descendents will be more or less under the influence of tubercular diathesis, even before this state of the œconomy has revealed itself by any external symptom.

Tubercles may appear in the lungs at a very early period of life, but they are oftenest found in the few years that follow puberty. It is also the fact, that although, after the age of puberty, the patient may appear to escape from the fatal influence of tubercular manifestation, the predisposition still exists, and the malady may return sooner or later.

Sometimes the lungs are suddenly invaded by tubercles, the generation of which progresses with frightful rapidity. This form of phthisis is promptly fatal.

Pulmonary tubercles follow precisely the same course as tubercles in general. According to Andral, they appear at first as small, white, friable masses, which sooner or later become soft, and are evacuated, leaving behind them an ulcerous cavity, or vomica, which generally spreads more and more, but in some instances remains stationary, and in a very small proportion of cases fills up and cicatrizes.

It is rare to find only one tubercle in a lung, and it is also rare to find them in one lung and not in the other. They have the greatest tendency to be developed in the right or larger lobes. They are usually in the interior of the lung; in others they are quite superficial and situated immediately under the pleura. They gradually converge as they increase in size and number, and, uniting, form tubercular masses. These assume the form of calcareous concretions, or they soften, and are evacuated into the bronchi, leaving caverns in the lungs, known by the name of vomicæ.

The matter being evacuated, we may be encouraged to hope that the parietes of the cavern will heal, and the patient escape the danger that threatened him: but these hopes are delusive; a predisposition to the generation of tubercles still remains. They will with greater or less rapidity be generated in the pulmonary tissue, and he will eventually fall a victim to their presence.

On examining the lungs of a person or an animal that has

fallen a victim to this fearful malady, they have been found disorganised to such an extent, that there scarcely remained a particle capable of accomplishing the respiratory function; or, if a part of the tissue remained somewhat healthy, it was so compressed and indurated, that it was no longer susceptible of receiving air into its vesicles. Indeed, it is evident that many phthisical patients cannot be said to breathe by the lungs for some time before they die. How is it, then, that they do not die from asphyxia? or what is the organ that assumes the place and function of the pulmonary apparatus? This is a problem difficult to solve.

The interior of tuberculous cavities is generally traversed by bands attached at both extremities to the sides of the cavity. These bands are usually composed of pulmonary tissue in a state of induration, and bloodvessels transformed into impermeable fibrous cords. In some cases, however, the vessels continue permeable, and, by their rupture, occasionally give rise to attacks of hæmoptysis. The substance of the lung around the cavities is sometimes healthy, sometimes filled with tubercles in different stages, and sometimes indurated, and of a grey or black colour. The walls of these cavities are generally formed by the parenchyma of the lung, either naked, or covered by the most concrete part of the purulent matter contained in the cavity.

The matter contained in tuberculous cavities is commonly a white or grey purulent fluid, in which are suspended numerous cheesy particles resembling the debris of tubercles. In other cases there is pus variable in colour and consistency; or blood both fluid or coagulated; or fragments of the pulmonary parenchyma floating loose; or calculous concretions loose and unattached. The selector of these passages has seen in the quadruped all these morbid appearances.

Tubercles are not often found in the liver. There is inflammation running on to decomposition. There is also fatty degeneration, but seldom tubercles. In the spleen they are frequent, but have been rarely or never seen in the pancreas. They have occupied the Fallopian tubes, and they have been met with in the testicles. They have been found in the muscular tissue and in the tissue of the bones, corroding and perforating them by the mechanical pressure which they exercise. They develop themselves in the very centre of the bone, and are surrounded everywhere by healthy osseous tissue. Finally, these tubercles have been found in the iliac veins, in the vena cava, and swimming in the venous blood in various parts.

Having thus studied tuberculization in almost every organ and every tissue, M. Lugot next proceeds to the important question, What is its cause? Here pathologists are much at variance.

Tubercles are parasitical organs,—according to this gentleman,—generated in the economy, with an organization that enables them to increase by intromission. It matters not in what tissue they are generated. With a slight difference in the form, they are the same wherever they are found; whereas they would be dissimilar in each organ, and in each tissue, if they were the products of inflammation.

Pneumonia is one of the most common maladies a surgeon is called upon to treat. If it were really the proximate cause of tuberculization, it would be easy to perceive the relation between inflammation as a cause, and the generation of tubercles as an effect. This, however, is not the case. No one has proved any connexion between the two. Bayle opened many patients that had died of chronic latent pneumonia: he found the lungs hepaticized, carnified, but never the seat of tubercles. Epidemics of pneumonia are by no means rare, but there has been no epidemic in which any great proportion of the inhabitants in which it has raged has become phthisical. It is, perhaps, doubtful whether pneumonia tends to increase tuberculization in the pulmonary tissue.

It is worthy of remark, that the theory which attributes the formation of tubercles in the lungs to inflammation has been often adopted and defended by pathologists who never would have thought of attributing the generation of tubercles of the liver to hepatitis—of tubercles of the spleen to splenitis—or of tubercles of the brain to encephalitis, although the same law necessarily presides at their formation.

Some pathologists look upon tubercles as an alteration or product of secretion. Tubercles are supposed to be inorganic bodies, deposited in the tissues, and formed by the gradual deposition or incrustation of secreted matter: the tubercle, therefore, is developed by the continual addition of particles of tubercular matter secreted in the same manner. Judging *à priori*, and without consulting nature, this appears a very simple mode of explaining the formation of tubercles; but if we analyse it, the error is immediately evident. In all bodies that increase by juxtaposition we find the traces of the successive aggregation of the molecules. If we examine almost any kind of tumour, we find the successive layers of which it is formed; but the structure of the tubercle is perfectly homogeneous, and there are no successive layers. It should be also recollected that tubercles exist every where, and in every tissue; whence it would follow that a substance always identical is secreted by the most dissimilar tissues, whenever the general predisposition which appears to preside over the manifestation of tubercular structure exists.

These theories are all erroneous, and we are driven to the belief that *epigenesis* is the only principle that will satisfactorily account for tuberculization. By epigenesis we mean the formation of organ-



ized bodies by a continuous addition of their different parts. We have sufficient proof of this in the uniformity of form and colour and density of tubercles, and their organization and means of nutrition. Tuberculization may be described as a parasitical function, which grafts itself with deplorable facility on all the other functions, which it at the same time deteriorates. It is not an isolated phenomenon. It is the most frequent and terrible manifestation of scrofula—the undefinable Proteus of which we are now studying one of the forms.

Tubercles are probably at first small vesicles of extreme tenuity, filled with an aqueous fluid. There are no granulations in the first period of the existence of these morbid productions. They have to pass through the liquid state before they become solid. Gemers was the first to give publicity to the opinion that tubercles were at first mere vesicles. This theory was strengthened by the observations of M. Dupuy, professor of the veterinary school at Alfort, whose researches were made on horses. He considered these vesicles as hydatids, which, according to his views, constituted the first period of tubercular existence. M. Lugol agrees with M. Dupuy as to the primitive liquidity of tubercles, but he does not take upon himself to decide whether or not these vesicles were hydatids.

When tubercles have arrived at a size which enables us to appreciate them, and when by most physiologists they are termed granulations, they have been described as hard ovoid bodies, the density of which is greatest in the centre; they afterwards soften, and that from the centre to the circumference. In some circumstances, however, the centre of the tubercle is not the centre of the tubercular tumour, and consequently one part of the tumour may be softened while the other appears hard.

*Tubercular suppuration.*—Suppuration is one of the stages through which tubercles, generally speaking, have to pass in their progressive development. We say generally speaking, for all tubercles are not inevitably destined to suppurate, many undergoing the process of absorption or resolution. Tubercular suppuration is spontaneous, and takes place by an internal process as imperceptible as that of nutrition or generation itself.

We will first examine the suppuration of subcutaneous tubercles.

The fact which at first excites the greatest surprise is the insufficiency of topical remedies applied to tubercular tumours. Poultices, leeches, &c. do not appear to exercise the slightest influence: they neither appear to accelerate the process of suppuration.

The pus of tubercular abscesses has a peculiar characteristic odour, which it is sufficient to have once smelled in order to be able always to recognise it. It is nauseous and penetrating, and the peculiar odour of it is not soon forgotten. The pus is remarkably fluid, and often contains flakes of crude tubercular matter.

M. Lugol next takes into consideration external tubercular ulcers; but we have comparatively little to do with that, though we have much to do with the suppuration of internal tubercles in the lungs, the development of which is attended by the most disastrous consequences, not only on account of the importance of the organ that is attacked, but the rapidity with which the disease proceeds. At the onset the suppuration of pulmonary tubercles is latent and obscure. We may perhaps guess at it by the application of the stethoscope, with little or no satisfaction; but this state of things is not of long duration in an organ, the functions of which occupy so prominent a part in the economy of the animal. When the suppuration is abundant, the entire system sympathises with the sufferings of the animal. Slow fever comes on without any considerable increase of the pulse. The features and the system generally become extremely emaciated without any apparent cause. How palpable is this in the cow! It is a valuable diagnosis of pulmonary tubercles during the early or middle stages of the disease.

Pulmonary tubercular suppuration occasions cough, difficulty of breathing, absorption of the lungs, and all the phenomena of colliquative fever.

In cases of pulmonary phthisis, we too frequently attribute all the appreciable functions and lesions to the disease of the lungs; but in this disease there are almost always tubercles in the spleen, the mesentery, and various other lesions; and the suppuration of these tubercles contributes to many of the symptoms that are witnessed.

The development of pulmonary tubercles is subject to various remissions and recrudescencies. There has been a remission of many of the symptoms, but from many a cause; and in both the biped and the quadruped there is not a more frequent one than on the return of the spring a fresh growth of tubercles seems to take place, and the patient is hurried off.

M. Lugol mentions a circumstance with regard to the human being and the cow, which is indeed of unfrequent occurrence, but occasionally seen,—cancer in the breast of the female, and of the udder in the cow. The mother is perfectly well for two or three or four months, and then the little one exhibits some symptoms of scrofula. What is the consequence? On the other hand, the mother may have been subject to scrofula, and some cancerous affection appears on the child. Persons also, and animals that have been scrofulous in their infancy or their youth, are attacked with cancerous affections at a critical period of life. Local causes have evidently very little to do with the pathology of many of these cases.

We make no apology for the introduction of this long analysis of M. Lugol's valuable lectures, and shall probably return to the subject. These lectures appear in the Medical Gazette for August and October.

# THE VETERINARIAN.

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VOL. XIV, No. 168.]      DECEMBER 1841.      [New Series, No. 108

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## INTRODUCTORY LECTURES.

AMONG the introductory lectures at the opening of the Medical Session of 1841-2, at which we have been present—and, from old habit, we generally attend as many of them as we can—we were particularly struck with that of Dr. Taylor, at University College. There was a simplicity and plainness and straightforwardness rarely found in these exhibitions, which could not fail of making a deep impression. It was afterwards published in that excellent periodical “The Lancet.” From that periodical chiefly we extract the following account of it, and, substituting occasionally the word “veterinary” for “medical,” we cannot offer a more useful present to our readers, young and old.

“A knowledge of medicine is taught in two ways, essentially distinct, and both important. The one is by the delivery of a general course of lectures on what are called the principles and practice of medicine, and in which are described whatever appertains to the history and treatment of disease; and the other consists in the actual demonstration of the phenomena so described, and the treatment pursued in the hospital. Each has its peculiar advantages, the one making us acquainted with the *science*, and the other qualifying us for the practice of the art of veterinary medicine.

“In the lectures on the principles and practice of medicine, the student is presented with a *systematic* view of the science, a summary of whatever has been observed in relation to the agencies that produce disease—the symptoms which distinguish them—the remedies which are used to relieve them—and their most ordinary termination. Whatever general precepts have been arrived at by the united labours of medical men in all ages, whether relating to the nature and laws of diseased action, the circumstances giving rise to it, or those known to relieve it, are plainly stated.

“A few of the rarer forms of disease may scarcely come under our notice at all, while the more important ones will fre-



quently pass in review—their specific characters will be noticed—those which distinguish one case from another of the same kind, and the influence of these differences on the progress, treatment, or termination of the case. Our most important business is to shew you *what* to observe, and *how* to observe—to superintend your first trials, to guide you through the chief difficulties of observation, and to point out its fallacies and the means of avoiding them—the variations in the form, course, and fatality of the disease produced by differences in the age, strength, and other peculiarities of the subjects of it—the causes which may give rise to the affection, and the various kinds of treatment which have been adopted for its relief.

“It will be the duty of the clinical teacher to accompany you to the stable, and to call your attention to the state of one and another patient, and to demonstrate to you the peculiar phenomena which present themselves. Supposing it to be a case of pneumonia, he will point out to you the peculiarity of the countenance and of the respiration, and of the gait or manner of standing—the peculiar pulse—the state of the mucous membranes and of the skin generally. He will then take you to another stall, and shew you the different character of the symptoms in a horse labouring under pleurisy. In the adjoining stall will be a third patient with the indications of severe catarrh. He will inquire into the circumstances that *preceded* the attack, and single out those which *produced* it. He will watch with you the changes that arise from day to day. If the case goes on favourably, he will endeavour to appreciate the influence of the remedies, and he will make allowance for the effects of other circumstances, such as the age or the strength of the patient. If the case ends fatally, he will make a careful examination of the body, and inspect all the organs—he will compare and connect the diseased part with the symptoms—he will confirm or correct the diagnosis, and so prove the value of the symptoms on which it was founded.

“A second case will probably present itself, and the same process will be repeated. Many of the same symptoms are observed again, and your acquaintance with them is strengthened and perfected. Some of the previous symptoms are absent—others are superadded, and you learn what is *essential*, and what is *accidental*. The same ground is travelled over again and again, as cases present themselves, until you have had an opportunity of becoming familiar with all the important features of the disease. These are your chief duties in the stable.

“In the lecture-room the principal features of the case will again be recounted; the value of the chief symptoms commented on; the grounds of the diagnosis, prognosis, and treatment more

fully explained; the difficulties of obtaining a correct history, arising from the ignorance, prejudices, or weakness of the owner pointed out, as well as the precautions requisite in adopting any conclusion respecting the causes of the disease and the effects of the treatment. Lastly, at longer intervals, a considerable number of these cases are viewed in connection; the phenomena *common* to most of them are placed in relief; the bearing of these on doctrines either past or prevailing is indicated; and something, perhaps, is added to the common stock of our knowledge, or, at least, the *mode* of doing this is exhibited. This comparison will, I trust, have made it apparent that the two methods of instruction—by systematic lectures and by clinical demonstration—are mutually dependant, and either would be incomplete without the other. The one teacher prepares you for the observation of disease, the other points out its actual phenomena. Without this preparation much would be unintelligible, and without the actual observation of disease the mere description of it would be useless. The two subjects stand nearly in the same relation to each other as a lecture on anatomy and the practice of dissection. The student would be a very indifferent anatomist who had obtained all his knowledge of the subject from lectures; nor would his attainments be at all superior if he contented himself with being a simple spectator whilst another dissected, and neglected to obtain any previous knowledge of the general composition and arrangement of the elements out of which the body is framed. From the preceding statement of the work you are about to be engaged in, its *importance* will at once be obvious. It is the application of every previous attainment to the prevention, discrimination, and treatment of disease; the daily business of your future lives; the necessary complement of a useful education; the great end to which all other branches of medicine, although indispensable, are subservient, and without the addition of which they are wholly useless to us.

“It is highly important that we should have a clear perception of the right method of becoming what we all desire to be, skilful practitioners of veterinary medicine. It is a rule which admits of no exception, that to be able with certainty to do any thing well we must do it repeatedly. If our reasoning faculties are to be improved, we must apply them to the studies that will exercise them—if our external senses are to be sharpened, we must use them constantly on their proper objects—if we are to acquire dexterity in any manual operation, we must repeat it a certain number of times. To see much, and to see it well, is the sole means of obtaining perfection. In all mechanical employments, other things being alike, the skill of the artizan is proportioned

to the time he has employed in diligent labour. The experienced eye—the power of perceiving the minute differences which discriminate or unite the objects placed before us—the readiness of comparing new phenomena with those that are already treasured up in the mind, these are accomplishments which no rules can teach, and no precepts can put us in possession of. It is a portion of knowledge which every one must acquire for himself, and which no one can leave as an inheritance to his successor. We cannot, therefore, begin too early, or see too much. By habitual exercise our senses will acquire a delicacy truly astonishing, and it is to this that we trace the marvellous sagacity with which some skilful observer seizes the phenomena which entirely escape the attention of others. What is that which prevails so often over the greatest erudition, and the most solid information, but the frequent, and methodical, and just exercise of the senses. It is that *tact* for which some observers are so remarkable, and which all might possess by the exercise of sufficient labour and diligence.

“The too prevailing fault of the pupil is, that he neglects the hospital practice. The materials of observation, to a greater or less degree, are always to be found there. There is a variety of disease to be studied with little expenditure of time—there phenomena may be most closely scrutinized, the treatment of the patients is completely under control, and the effect of remedies there most clearly demonstrated; and when death takes place, the diagnosis of the practitioner can be put to its ultimate test, and the effects of disease on the structures of the body can be studied with the best aids, and on the largest scale.

“The great use of clinical lectures is, to prepare us to understand and to appreciate the phenomena of disease when pointed out by those whose time and attention have been especially directed to these observations and study. With the advantage of an experienced guide, we not only learn much more in the same time, but we observe many things that would otherwise pass unnoticed before our eyes. Many appearances of great practical importance will be demonstrated, which the student had seen almost daily, but which now, for the first time, arrest his attention. It is only by following the visits of skilful practitioners that they who are entering on their career can rapidly acquire experience. Young men are too apt to pride themselves on their skill and sagacity; but they may depend upon it, that medicine can be learned only with a medical man and with patients. They cannot form themselves without aid. They must have a practised guide, or they will wander in the mazes of error, or sink into empiricism. Do not suffer yourselves to be deceived by the belief



that it is of little importance for you to see practice now. This is the best opportunity that will occur to any of you, and you are bound by the strongest motives to avail yourselves of it. Your interest urges you to it, for your success in life will be proportioned to your practical attainments. Your peace of mind demands it, for the man duly prepared can alone cheerfully and boldly obey the summons to his patient, conscious that, whatever the case may be, he is prepared to do all that his art is equal to. Your highest sense of duty not less loudly calls upon you ; for to you is committed a trust on which the life and enjoyment of many a sentient being depends."

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At the commencement of the Spring Session, the following excellent advice was offered to the medical students by the Editor of "The Lancet." It will harmonize with the remarks of Dr. Taylor, and to those that will follow from Professor Bernard, of Toulouse.

"There are few topics of more general interest, in relation to the enlightenment of the medical profession, than is the subject of medical education. On this important question it would be difficult to decide what class of society should be most interested ; whether the junior member of our profession, just entering upon the studies which are to fit him to become an honourable and useful practitioner of medicine ; whether the senior of our profession, who is contemplating the best means of training his sons to follow in his own footsteps ; or whether the public, who are to receive the benefits from well-directed labours, or are to support the pangs and sufferings entailed upon their constitutions by misapplied talent or neglected studies. Indeed, it would be a hard matter to arrive at a conscientious judgment upon a subject of such paramount, such vital importance to every estate. Reasoning upon the elevated position which medical education should occupy in the mind of every man in Great Britain, we should be induced to infer that no topic does engage the thought of every educated mind more warmly ; that, as self-security, ease, health, and even life, are involved in the question, none is more affectionately fostered by all men, of every shade of politics and rank, and that legislation upon this subject, and wholesome regulations and restrictions, must constitute the basis of the medical law of this enlightened country.

"But if we turn our minds from that which should be to that which is ; if we inquire whether that which we have written be the actual picture of the position of the profession in relation to education, we shall find, to our sorrow, that it is not. We shall

see the student in medicine, unrestrained by wise and wholesome regulations and neglecting his duties from season to season ; we shall see him wasting the most valuable hours of the best years of his life, spending his time in listless idleness, or squandering health and reputation in sensual gratifications. As a close to this demoralising course, the examinations are to be passed ; but he has neglected the studies which each season should have seen completed ; he finds, too late, that a sound knowledge of the study of medicine is not the work of one year, or of two ; he discovers, to his remorse, that the first month of his studies, as the last, had its fair proportion of labour allotted ; and, discontented with himself, he wends his steps to the threshold of the *grinder*. Three weeks of questions and answers by rote are passed, and he slips through the drowsy examinations of the College and the Hall, licensed to practise.

“Fathers! is this the course of study that you could wish your sons to pursue? Society! is this the model of the practitioner to whose keeping you would entrust the health and lives of your families and yourselves, or the secrets of your private life? We anticipate your reply ; we anticipate also your remark, that the sketch which we have here briefly traced is the dark side of medical education ; we hear you say, Have not, and do not, young men distinguish themselves? They have, and will. They ever will. It is the generous nature of youth to emulate the good and great, to seek distinction and honourable fame. These have their reward. Let them be content. They will perceive that our friendly hint is not meant for them, but for those whom each among them knows. We wish them every success. Would that, by our means, their thoughtless companions could be made to think, and to turn, while there is yet time, from the path of obscurity to that of industry and perseverance.

“While the junior, the senior, and the public would recoil with horror before the prospect which neglected education unfolds, we will endeavour to anticipate their wishes, by inquiring briefly into some of the causes of the state of things which we have here depicted ; and the first of the causes which often prevails is one that originates in the teachers. The national freedom and spirit of private enterprise, which is the characteristic of our country, has multiplied this class of medical men very materially within the last few years ; and, since the recent regulations of the College of Surgeons, medical schools, with full lists of teachers, may be found in almost every large town throughout the country. The natural consequence of this increase has been, diminished profit to the whole ; and the worst paid men in our profession, at the present time, are unquestion-

ably those to whom medical education is entrusted. How many general practitioners would scorn the hard-got incomes of the most eminent amongst our teachers. We could point to some who, with the highest reputation and undoubted ability, yet rank with the poorest in our profession in regard to wealth. But, since it will be easily admitted that teachers, too, must live, they are constrained to divide their mental strength between the labours of their proper functions and the practice of medicine. Hence originates a deficiency in the time and attention which they are enabled to bestow upon their especial business of instruction, and a consequent loss to the student.

“The next cause, and one of great moment, takes its source in the very injudicious period selected for examination by the medical corporations. The student, at his first entrance on his studies, feeling that no test of industry will be required of him by these bodies until the close of his three years of study, postpones the difficult task of acquiring a habit of study, until first one, and then a second season is lost. Again, if he contemplates his examination at all, it is only to regard, with fear and trembling, a confused mass of acquirement, a heterogeneous compound of varied information, more than a single brain can hold, upon which his capability to practise is to be tested, and his merits decided. How infinitely more rational, how much more just and advantageous to the student would it be to divide the numerous subjects constituting the medical curriculum, and establish an examination at the end of every six or even of every three months. By such an arrangement, the student’s labour would be required to commence with his first entrance upon his studies; and many an unfortunate man, having his incapacity detected at the end of the first three or six months, might be saved the loss of time attendant upon the pursuit of a profession in which he could never succeed, and the ruin and disgrace attached to rejection at the close of his studies.”

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*A Discourse pronounced at the Termination of the Session of 1834, at the Veterinary School at Toulouse, by Professor BERNARD.*

THERE is so much eloquence, good feeling, and true philosophy in the address of Professor Bernard, at Toulouse, at the termination of the Session of 1834, that we do not scruple to add it to the preceding orations.

“Following the example of the other schools of this city, to



which so many young men, eager for knowledge, press, we, Gentlemen, are assembled to render to the public an account of our labours, to bestow the accustomed rewards on those who have well deserved them, and to restore to our country those young men whose services and whose scientific attainments it reclaims.

“ We may have some cause to fear, Gentlemen, that this meeting, devoted to one purpose alone, may not offer you the same attraction which you would find in other schools. In them, each of you reckons a son, a parent, or a friend ; and every word will recall to you the still glowing recollections of youth, and interest you by the retracement of the picture, always pleasing, of the utilities connected with letters and the arts.

“ Our pupils, however, are, for the most part, strangers in this city and department ; few persons will associate themselves with their triumphs, or be identified with the recompense of their merit. Our labours are less imposing than those at other schools ; they are simple as the fields in which their nature and their usefulness are about to be developed.

“ Nevertheless, we hope that they will not be without interest to those well-informed proprietors of land with which our happy country abounds ; for they comprehend all that concerns the preservation and improvement of domestic quadrupeds, the source of agricultural prosperity and national wealth. The philosophic physician will here remark the bond which so intimately unites the two branches of the healing art ; he will see with much satisfaction the means and the proceedings which he adopts in order to preserve the existence of the noblest and the most valuable part of animal life renewed and perpetuated in our medical treatment of the brute.

“ The philosophic physician, I have said ; for there are few beside that enlightened class of men who seem yet to have formed a proper conception of the extent and the difficulty of veterinary medicine. The bulk of society see only in our proceedings a rude art, which the farrier can practise without preparation and without study. In order to dispel this error, permit me to trace a rapid sketch of some of the acquirements which must form the basis of our practice.

“ A line of distinction had long been drawn between man and the inferior animals in the study of natural history. It was reserved for our times to unite together the links of the grand chain of organized beings—to bring together all the scattered elements ; and, in a word, to create the philosophy of science.

“ Can I speak of natural history and anatomy without recalling the sentiments, and often the language, of that universal genius

whose loss science and letters will long mourn—I mean the immortal Cuvier.

“Anatomy (said he) is not that uninteresting, worthless kind of geography of the animal body which describes the organs, their form, and their situation; there is something more in their economy than the fibres and the vessels—the material mechanical instruments of existence. These organs must all be viewed in action, and executing all the various functions which concur to fill up the mystery of life. How can we arrive at this important end if we bound our studies to one animal alone? It is necessary that we should, in some sort, trace the principle of life from the animals who have received but a feeble portion of it, and whom only a shade scarcely perceptible separates from the inanimate kingdom, to the more perfect beings—to those who possess the principle of life in its entire development, and all whose faculties attest their high origin. It is thus that physiology, like every other science, can be founded only on a full collection of facts. One single exception may destroy the whole system—one single anatomical fact may reverse a whole cloud of physiological hypotheses.

“Medicine, in order to accomplish the purpose it has marked out for itself, must embrace the study of all organized beings.

“One admirable law of simplicity presides over the organs, so numerous and so various, which constitute the animal frame. Around the principal organ of one function we see other accessory organs forming themselves into groups, all displaying one invariable affinity—one striking analogy. In one place, an important organ compensates for another that is endowed with feeble power. Anomalies are only so in appearance; and even monstrosities, which are often called the freaks of Nature, are all consistent with that grand law,—the unity of composition in an organic being.

“Unity and variety; this is the motto of Nature. She abandons herself to all her fecundity of invention, and seems to play with the accessory forms, while, always faithful to her principle of unity in passing from one class to another by an almost insensible gradation, she seems to lavish organs which no longer have any function to fulfil: such are the vestiges of feet in animals that are destined to crawl, and such, also, are the imperfect digits in the solipede, which demonstrate so beautifully the law of compensation.

“These laws, so simple and so harmonious, had not escaped the profound observation of Aristotle; but their systematic development was the work and the glory of modern naturalists,—Cuvier, Geoffroi, and Deserres.

“ Thus animal medicine, like that of man, derives its fundamental principles from the same sources—that vast collection of animals which covers the surface of the globe, or inhabits the regions of the air, or the depths of the sea. The organic elements are the same—the physiological laws are the same in all; and, in all, the machine is exposed to the same derangements. Man and the brute are alike condemned to live and to suffer, while analogous diseases, and often of precisely the same character, threaten and overwhelm them. What proof of this can be more striking than the benefits derived from vaccination—the most important medical fact that we possess? Are they not the inferior animals which furnish man, I may almost say in return for the care which he bestows on them, with the only safeguard against this dreadful pest, which had thinned every previous generation?

“ The study of comparative disease is, then, as useful and as important as that of comparative anatomy.

“ If the narrow limits to which I am now compelled to confine myself would permit, I might shew you the three kingdoms of natural history unfolding their treasures, in order to combat the diseases to which man and the brutes are jointly subject. I might speak of the successful labours of chemistry in unveiling all the affinities which play in the deep recesses of our various organs—the impenetrable laboratory of Nature. I might shew you every living being equally enveloped, acted upon, and modified, without ceasing, by the agents which surround them,—the air, the light, caloric, and electricity. How shall we arrive at the knowledge of these common diseases if we are ignorant of all these agents, and their properties, and the divers modifications which they impress on the economy of life? and how difficult and complicated must be that medical science which comprehends such numerous and different elements?

“ With reference to general economy, mechanics and physiology lend their aid to enable us to employ advantageously, and to multiply, the powers of our animals—those living machines, those travelling manufactories—and to draw richer products from them. But I must confine myself to the consideration of our art in its reference to medicine.

“ If veterinary medicine has borrowed from that of man—her elder sister—some general precepts which have guided her first steps, often, also, has she wandered with it in the labyrinth of theories and of systems. How could it be otherwise? The science of life, is it not as difficult in animals as in man? And whatever part of this grand problem the votaries of either has studied, his progress is arrested at the first step.



“ The resisting and contracting vessels, the fluids that circulate, and the force which gives motion to the whole machine—these are the essential, indispensable conditions of life. All at once the contraction ceases; the fluids cease their current; and the living being no longer exists. They are, nevertheless, the same vessels—the same fluids; the motion alone is wanting. All is in a state of repose;—it is the calm of death. A little time after this, and many physical agents, before chained, powerless, assert their rights, and there remains nothing of the being that had lived and moved.

“ What is it, then, that has taken place in these two portions of time, so short, at the termination of life? Sometimes nothing—nothing of material consequence. Life has ceased. Life is, then, organization in motion. This is the primitive fact; and beyond this we cannot penetrate. But to derive, as has lately been done, life from organization, is it not to prejudge a question that cannot be resolved? We could, with more reason, perhaps, trace the formation of the organs under the influence of life; for we have something analogous to this in the transformations of the seminal molecule. By what power is it enabled to represent so faithfully the form of the being whence it sprung? We clearly perceive an intimate connexion; but it appears that, to say which of these phenomena gives birth to the other, is almost impossible.

“ We have spoken of medical science as one of the most complicated and difficult subjects with which a human mind can be occupied in order to impress on your minds the importance of the veterinary art. If medical science reposes on the grand laws by which organized matter is governed, the veterinary art must rest on the same basis.

“ In the human being, diseases assume a different type according to the age and character and organization of the patient. How different from each other are the diseases of the male, the woman, the infant, and the old man! We may, therefore, expect that they will assume a different character in the ruminant and the horse, the carnivora and the feathered biped.

“ Our principal attention has hitherto been directed to the horse, but the instructions of our schools are now extending to every animal that has been domesticated among us, and is serviceable to us. That instruction is purely our own. It is the gift, or the bequest, of a few individuals belonging to ourselves, and to whom we owe a debt of gratitude which we shall never adequately repay. The theories, and the facts with which they have enriched us, were their own, not borrowed from, although supported by, the practice of human medicine. Emancipated from

the government of those to whom, however, we owe a deep debt of gratitude, we have before us, and can claim as our own, a vast domain for medical observation; and we can offer, in our turn, to our elder sister many a useful hint, perhaps not sufficiently estimated by her, or by us: for many of the modern and most useful divisions of theory and of practice are founded on the experiments of which our patients formed the basis.

“There is, however, or ought to be, no jealousy with regard to this. Each is, or should be, emulous to increase the honours and the usefulness of his peculiar profession. We are jointly labouring to enlarge the boundaries of our observation and experience. We are rendered inseparable by the pursuit of comparative anatomy, by a comparison of the diseases to which the patients of each are exposed, and by our mutual success in promoting the happiness of our respective patients.”

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WE now return to our native country, and to one of our own profession; and we exult at having the opportunity of inserting the beautiful and erudite oration of Professor Spooner, at the commencement of the session 1841-42. The kind feeling which he expresses towards his class and his professional brethren will be duly estimated by them all.

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Gentlemen,—In presenting myself thus unexpectedly before you to deliver the introductory address to the present sessional course of lectures, with a notice of only a few short days, and at a time, too, when my mind has been much occupied in the pursuit of the daily duties connected with the practical department of this Institution, I feel that I have some claim upon that indulgence, which, I doubt not, will be most readily granted by you all. You know the painful circumstance which has placed me here to day: it is the recent death of Mrs. Sewell—a sudden and unlooked-for occurrence, and which has inflicted a great loss, not only upon one to whom she was nearest and dearest, but also upon every individual who had the honour of her acquaintance. To make further comment on this lamentable subject would, I feel, be out of place here; nevertheless, I cannot help stating that it is a calamity, which, to use a common phrase, strikes home to the bosoms of us all, and renders it quite unnecessary for me to offer any further apology for the absence of Professor Sewell.

Believe me, Gentlemen, although I readily complied with the request made by my respected colleague, that I would officiate for him on this occasion, I at the same time felt the weight of the responsibility which I incurred, and knew full well how inadequate I was to the perfect fulfilment of the task.

It has been usual, in former introductory addresses delivered in this Theatre, for the Lecturer to offer an outline of the origin and progress of the Veterinary Art, and particularly so as connected with the foundation and subsequent exertions of the College. This, however, has now become matter of history, many of our veterinary writers having given it a place in their valuable works; consequently, in my humble opinion, the necessity of your time being occupied by any feeble attempt of mine to embellish a "thrice-told tale," is altogether superseded.

Addressing myself, then, to those members of the College, and other friends, whom I have the honour to see before me, and to the students of the last session, I would say, "bear with me;" while, to my junior pupils, I make a few imperfect remarks upon the importance of the profession which they have adopted, and endeavour to give a hasty sketch of the duties that imperatively devolve upon each of them in the pursuit of their studies, and also upon their preceptors, in directing them in that path which it will be necessary for them earnestly and diligently to follow, in order to render themselves competent practitioners of the veterinary art.

Be assured, Gentlemen, that the science of which you are about to commence the study is one well worthy the application of your talents, and its pursuit will be found by you to be fraught with interest and profit to the mind.

Veterinary medicine, as practised in this, and, I believe, in all other countries, is understood to embrace that branch of comparative medical science which applies to a knowledge of the anatomy, physiology, and pathology of *all domesticated animals*.

What a wide field of research, then, is thus opened before us! calculated to awaken all the energies of the mind to full exertion, and yielding to the assiduous labourer a rich reward.

If my opinion were asked as to what course of study was most fitting to be pursued in order to exalt the mind of man from himself to his Creator, my answer would be, Anatomy and Physiology, as applied to the animal and vegetable kingdoms.

We are told that, in ancient times, when, from ignorance, deep-rooted prejudices existed against dissections being performed upon the human body, the professors of medicine were so impressed with the necessity of possessing a knowledge of anatomy,



that they were in the habit of selecting those animals which they thought to be most analogous to man in structure, in order to exercise their scalpels upon them ; and thus, by a hypothetical mode of reasoning, assist themselves in the practice of their art.

Dwelling upon this admitted fact, and reflecting upon the reasoning faculty of man, is it not matter of astonishment that in this country, famous for its progress in every useful art, and its acquaintance with every ennobling science, and for the value, beauty, and number of its domesticated animals—is it not a matter of astonishment that the veterinary art can only date about half a century back as the period of its origin ? Happily, however, for us, of later years, the “ schoolmaster has been abroad ; ” the education of the people has made rapid strides ; the mask of ignorance is thrown aside, and I am satisfied that this has materially tended to the improvement of our long neglected art. Upon the general enlightenment of the community we must depend for aid, in common with our own exertions, to enable her to occupy the station to which she has a just right to aspire, in connexion with the sister science of medicine. I confess that I am not one of those who are willing to admit that a greater power of the mind is required to be exerted in obtaining a knowledge of human than of veterinary medicine ; yet we must ever be content to stand second to the medical profession, particularly so as regards emolument. Their employment depends upon the moral responsibility of man ; and while we have ample proofs to advance from Scripture that ours should be placed upon the same footing, I fear that it will too often be found that the engagements of him who is called upon to alleviate the sufferings of an animal rest too much upon the calculation of the owner of his patient, as to the probable pecuniary profit which will result from his services. What can be a greater proof of this, than the invidious distinction which has so long been observed in this country between the horse and other animals ? a distinction which, I am emboldened to assert, can only be traced to ignorance and avarice : and, were it necessary for me to add force to these observations, I would say *ignorance* of a twofold character ; because it would require but little argument to shew that neither in a moral nor in a pecuniary point of view is it right.

I fear, however, that it must be admitted that we ourselves,—the body of the profession,—have too long lent our aid in upholding this state of presumptive usurpation, and have been content to curtail our usefulness and our emoluments by confining the exercise of the art which we profess to practise to one class of animals alone.

If this be true—if we are thus self-convicted, let us ask ourselves the question, Whence has this evil had its origin? The answer which I am compelled to give is, *mainly, in the inefficient education of the pupil, and, to the efficient education of the pupil we must look for its remedy.* I trust, Gentlemen, that I am not saying too much when I state that, of late years, in this respect, considerable advances have been made. More, however, yet remains to be achieved; and I feel assured that I am expressing the sentiments of my colleagues, in common with my own, when I state, that we are most anxious so to conduct the affairs of this Institution as to enable it to keep pace with the spirit of the times, and to perfect it as a school of veterinary medicine. I would fain hope that the period will arrive when, by the force of knowledge, the grand truth will be deeply impressed upon the mind of every man, that it is his duty to

“Cast round the world an equal eye,  
And feel for all that live.”

The comparative anatomist is presumed to be acquainted with the structure and economy of the human frame, taking man as his standard; and although I am willing to admit that a knowledge of the anatomy of man is of infinite advantage to the veterinary physiologist, yet I hold that to the practitioner it is not essentially necessary in order to enable him to pursue his professional duties with satisfaction to himself and advantage to *his* patients.

Many of the higher animals, particularly those we are most frequently called on to treat, in a structural or anatomical, and in a great degree, even, in a functional or physiological point of view, bear as striking an analogy to man as they do to each other.

As illustrative of this fact I will refer you to the chylopoietic viscera, or, in other words, the digestive apparatus—that highly important and complicated system whose office it is to assimilate the material upon which an animal feeds, whether flesh or vegetable, to the constituents of which its body is composed. In order to simplify our subject, we will more especially confine our observations to that division of this grand system termed the alimentary canal, signifying the passage from the mouth to the anus—a continuous tube, varying in its dimensions and general structural development in different parts of the same animal. So striking, indeed, are its peculiarities in animals of different species, that, by a cursory description of them, I shall be enabled to shew you that there is no greater semblance between

the stomach and intestines of the horse, the dog, the sheep, and the swine, than there is between the same organs in each of these animals as compared with those of man himself. And when we associate with this the established fact, that, depending upon the peculiar susceptibility of each division of these organs, will the effects of all internal medicinal agents be produced either directly, or, through them indirectly, upon every other part of the body, we shall, I trust, be impressed with a due importance of this division of our subject.

Drawing your attention to the anatomy and physiology of the alimentary canal, it will be right that, in the first place, I should direct you to its commencement—that I should speak of that part which is designated the mouth.

And if we take a cursory view of the mouth of the horse, we shall perceive, in the first place, that he is externally endowed with lips, having powerful muscles and numerous nerves entering into their structure, by means of which he is not only enabled to grasp his food with facility, but also to select it with a nicety scarcely to be credited by the unobservant mind; thus possessing a compensatory agent, as it were, which in a measure may be said to serve him in the place of hands. Within, he has a variety of teeth, some for the purpose of cutting his food, which are designated incisors, and others termed molares, adapted for grinding it down, and, with the assistance of the salivary fluid, preparing it for the next process towards assimilation.

We see then, at once, by the arrangement of these parts, that it *must be intended by nature* that the horse should masticate his food considerably; and were we to rest our inquiry here, we should also infer that this triturative action is effected prior to his performing the office of deglutition, and our inference would be correct; but it is only by further anatomical investigation and a strict observance of the habits of the animal that we can prove to demonstration that it is so.

Let us turn to that class of animals termed ruminants; and although we have not developed in them to an equal extent the prehensile power of the lips, it is compensated for in the roughness of their inner surface, and the remarkable structure and muscular action of the tongue; and while there is the absence of the opposing incisor teeth in the upper jaw, the additional number of them, their form and position in the lower maxilla, together with the peculiarly constructed “pad,” placed upon the under surface of the intermaxillary bones, admirably adapt them for cutting the herbage and the succulent roots upon which they feed. Here, too, we have as perfect a development of molar or grind-



ing teeth as in the horse, and, even to a greater extent—the lateral action of the lower jaw implying to a certainty that these animals also must subject their food to much mastication. Nevertheless, if from these isolated facts we were to draw the same inference with regard to deglutition that we have done in the horse, a farther knowledge of the anatomy and general economy of ruminants would prove to us that we were wrong. It would develop to us the singular fact, that they first swallow their food in a very rough state, and that, subsequently, in accordance with the will, it is again passed up into the mouth, where it undergoes the process of re-mastication. For additional peculiarities in these parts, I will briefly refer you to the dog, and we shall perceive that in him—a carnivorous animal—there is an absence of the prehensile function of the lips: yet, being endowed with a great capacity of mouth, and immense muscular power in opening and closing it, aided by the strength and position of the teeth, the protrusive agency of the tongue, and the grasping power of the fore extremity, he is readily enabled to supply himself with such food as is best suited for his sustenance and support. From the fact of the grinding surfaces of the molar teeth and the lateral movement of the lower jaw being altogether wanting, we can to a certainty state that the process of mastication must be in him—as compared with the two former classes of animals—extremely limited; while on the other hand, in the pig, which is omnivorous, the structure and function of these organs will be found to hold a medium state of development, and we are thus forcibly struck with their beautiful adaptation to the variety of food upon which he subsists.

Pursuing this subject, we will now, with your permission, take a hasty glance at that division of the alimentary canal which is situated in the cavity of the abdomen; and we shall see that it presents to us a somewhat complicated arrangement, varying in its length in different animals, and especially so in the general capacity and internal structure of the respective organs that enter into its formation. In every part of this canal it is described as being made up of three distinct tissues, placed the one over the other—the outer layer being the peritoneum, under which is situated the muscular coat, while, within, it is lined with mucous membrane. It is to this last named structure that I shall more especially allude.

The term mucous membrane is applied to that tissue which lines the inner surfaces of all those passages that have communication with external outlets; and when speaking of it as connected with the mouth, the stomach, the bladder, or the lungs, you might suppose that it was the same in structure, the same

in function, and the same in all its susceptibilities in every part of the frame. Such, however, is not the case; for not only, on the contrary, will it be found to differ most essentially in all these respects in various parts of the same animal, but also in the same parts of different animals. So marked, indeed, are its peculiarities, that, in a structural point of view, they can scarcely be said to bear any analogy to each other, and their susceptibilities for being acted upon by medicinal agents are altogether dissimilar. Regard, for instance, the mucous membrane reflected over the inner surface of the mouth: some parts of it are comparatively insensible, while in others dwell the special sense of taste, the variability of which in different animals it is unnecessary for me to comment upon.

Proceeding thence to the pharynx, we find the mucous membrane still continued; but it is altogether altered in its structure and in its susceptibilities. Trace it onwards in its passage down the œsophagus to the stomach, and here again we find, in our different patients, marked peculiarities of structure presenting themselves to us, especially so in the horse. In the stomach of this animal we see an organ that, when compared with his habits, is calculated to surprise and astonish us. We know not any animal that employs a greater length of time in the act of feeding than the horse. If he is left in a state of nature—if he is allowed to be out at grass—he is feeding, I will not say, with Professor Coleman, twenty hours out of the twenty-four, but probably more than fifteen. We should consequently be induced to say, *à priori*, that he must have a large stomach; but, instead of this, he has a very small one when compared with the same organ in other animals, and with the general structure of his frame.

Not only do we observe this peculiarity in the stomach of the horse, but we also find that one-half of its inner surface is clothed with a continuation of the same membrane that lines the inner surface of the œsophagus—a mucous membrane taking on the character of cuticular tissue, or that part of the integument which possesses but a very low degree of organization and sensibility. This is a remarkable structure as connected with the horse—one on which the investigations of physiologists have been engaged for a long period in endeavouring to ascertain the use which Nature has ordained that it should perform. Strange to say, there is a departure here from that which we usually find. In most other parts of the body where we have an alteration of structure, it takes place gradually; but the cuticular lining membrane of the stomach of the horse terminates abruptly, clearly shewing that its function, whatever it may be, is alto-

gether distinct from the function of that part of the stomach which is clothed with what we designate the villous coat, and on which we believe the gastric juice to be secreted. It has been said by some, that this arrangement is for the purpose of conferring on the animal the power of triturating his food within his stomach prior to its coming in contact with that surface where it is exposed to the gastric juice. Others have maintained, that its design is to retain the food until it has undergone maceration. I shall not detain you by offering any particular views on this subject, farther than a few remarks, comparing the internal structure of the stomach of the horse with that of other animals, and thereby shewing the untenableness of the position, that this structure is for the purpose of trituration.

I have already exhibited to you the immense power of the molar teeth; evidently and distinctly proving that the horse must masticate his food, and subject it to a great deal of attrition in the mouth.

Let us take a view of the internal structure of the stomach of the ox. In it there is also a continuation of the cuticular or insensible tissue,—in fact, the stomach of this and other ruminating animals is divided into four portions—that which is intended as the grand receptacle for the food, called the first stomach, or rumen; secondly, that which is placed at the bottom of the œsophagus, and named the reticulum; and, thirdly, the small pouch-like portion placed to the right, called the *manipulus*: all these compartments are lined with the same insensible membrane, differing however, in the structure of its surface in different parts of them.

Let us compare the inner surface of the stomach of the ox with that of the horse, and we shall at once perceive that there is a far more perfect arrangement for the process of trituration in the former than in the latter; yet, at the same time, in this animal, after the act of deglutition, the food remains for a time in the first stomach, where it undergoes a degree of maceration: still, however, it is necessary, in order that it should be prepared for the fourth division of the organ, where the gastric juice is secreted, that it should be returned to the mouth, and subjected to the process of remastication. It must appear, therefore, I think clearly, from comparative reasoning, that the cuticular coat of the stomach can perform no process of trituration.

Allow me to direct your attention to the gizzard of a fowl. It has been stated that the cuticular lining membrane of the stomach of the horse is analogous to the internal surface of the gizzard of a fowl. I admit that it is so; but I contend that there is no analogy between the gizzard of a fowl and that division of the stomach of the horse over which this membrane is reflected.



For it will be observed that, in addition to it, the gizzard has placed upon it, externally, an immensely powerful muscular contractile tissue ; it has, in fact, two muscles, which are so peculiarly arranged, the one with the other, as to give them the power of producing the act of grinding, or—if you will pardon the expression—a millstone-like movement on the contents of the organ ; and thus, by the action of these muscles, the two sides of the inner surface of the gizzard are brought into close contact, and thereby a distinct grinding process is effected. This structure alone, however, would not be competent to the desired end were it not that nature has ordained that, by the exercise of an instinctive faculty, this creature should, with the grain on which it feeds, take in portions of stone, which may be seen by you in the gizzard I now exhibit. These stones are, in fact, the agents by means of which the food is ground down, and, having accomplished their purpose, they pass through the alimentary canal unchanged. It might appear, at first sight, that these stones which we meet with in the gizzard of the fowl, and which are found in its fæces, have been accidentally picked up by the animal,—that it is a mere matter of chance,—that the bird is incapable of distinguishing between a stone and a grain of wheat ; but it is not so. Nature has ordained that, in the exercise of the instinctive functions of animals, they shall never err. There is that distinction to be drawn between instinct and reason : reason is liable to err, but instinct never does. We prove this by experience. We know that if we deprive an animal of the means of supplying itself with stones, the process of digestion becomes impaired, and its life is endangered.

These peculiarities of structure thus presented to our view must, I think, be calculated to impress upon our minds the importance of this division of our subject. I will, however, refer you to the stomach of the pig, a different kind of animal, and one of which I have here placed before me. Here we have a marked difference of arrangement from that developed in the horse or the ruminant. By far the greater part of the inner surface of the stomach is clothed with a villous mucous membrane ; but we perceive, at the opening of the œsophagus into it, there is an extension of the insensible cuticular tissue for some distance into the organ, but by no means to the same extent as in the horse. This is a true omnivorous stomach, which I recollect being pointed out by one of my old preceptors—one whom I have the pleasure to see before me—Mr. Youatt.

Going from the stomach of the pig to that of a dog, or a true carnivorous animal, we find a structure more analogous to the same organ in man ; and as we meet with this analogy in structure, so also, as far as my experience goes, do we meet with rela-

tive susceptibility of being acted upon by medicinal agents. This, however, does not hold good in every case. It does not follow as a matter of course, that, because you have a positive analogy of structure,—because by your ocular observation, or even through the aid of a microscope, you can ascertain no distinction of structure between the same organ in two different animals, that therefore they will be equally susceptible of being acted upon by the same medicinal agents.

Does not this reasoning, or, in other words, do not these truths which are hereby developed to us, forcibly impress upon our minds the importance of strictly and practically attending to each and every animal, in order to render ourselves competent to administer to the alleviation of the sufferings under which they may be labouring?

Shall it then, Gentlemen, be said, that in this, the 19th century, we, as members of a liberal profession, are still unimpressed with the importance of extending our investigations in the anatomy and physiology of all God's creatures, and thereby allow ignorance to be the stumbling-block to the exaltation of our minds and the extension of our usefulness to man? No! rather let it be said, that so forcibly has this subject, of late years, been stamped upon our minds, that we are determined to exert ourselves in every branch of study necessary to perfect us in the exercise of our art.

I, however, taking into consideration the value of the horse when living, and his comparative valueless carcass when dead, am of opinion that, in a practical point of view, he must ever form the prominent subject for our consideration, and thus, as it were, be referred to by us as the standard for many of our comparative remarks.

He is, indeed, a noble animal; and whether we look upon him in his domestic condition, or contemplate him in his wild state, the symmetry of his form, the vivid expression of his features, and his immense physical strength, are alike calculated to rivet our attention and excite our admiration. The elevation of his head, the inclination of his withers, the obliquity of his shoulders, the expansion of his nostrils—so intimately connected with his powers of endurance—the form and structure of his feet, and the elasticity of his progressive movements, combined with his willing disposition, would seem to imply that he was specially intended for man's service; yet, with all these attributes, taken from his native plains into a state of subjugation and compelled to travel on the hard roads, his feet would become broken, and he would be rendered comparatively useless, were it not for the aid of art in the application of a protective agent to his hoof.

I am thus, Gentlemen, naturally led to a brief consideration of the principles and practice of shoeing, connected with which I trust I shall be permitted to make a few observations upon the structure and functions of the foot and lower leg of the horse, as compared with other animals.

We find that the feet of most of our domesticated hoofed animals are cloven. They fall, indeed, under that class which are designated didactile animals. The foot of the horse, however, is a single foot. It is surrounded by one horny encasement or shield, thus constituting him a monodactile, or solidungulous animal. It will be pleasing to investigate the structure of this part of the frame in different animals, and to endeavour to shew how admirably in each of them it is adapted to the performance of the functions which nature intended it to discharge.

The hoof of the horse, I have told you, forms a single horny encasement. This, however, materially varies in structure at different parts. In the first place, let us consider it as a whole, and we perceive that it is an elastic, insensitive, yet organized shield, for the purpose of affording a surface of support to the animal, and protecting the sensitive parts which are placed within. On comparing the foot of a horse with that of a ruminant—the sheep, for instance—we should suppose, on a superficial view, that when this single hoof comes in contact with the ground in his progressive movement, concussion, as a necessary consequence, must take place at every step. Such, however, is not the case. Nature has been ever wise in the arrangement of these parts. So beautiful and so complicated did the late Professor Coleman consider the anatomy and physiology of this organ, and so essential for the veterinary practitioner to obtain a perfect knowledge of it, that, I believe, he occupied at least fourteen or fifteen days in delivering lectures on this subject. I will now merely allude to the peculiar divisions of the foot. This [*demonstrating it*] is the outer surface of the hoof, called the wall; and it is especially intended for the purpose of supporting the weight of the animal, while the under surface of it, termed *the horny sole*, is concave below, and is merely adapted secondarily to receive pressure, and that only from within; thus there are some parts of the foot which are calculated to be brought immediately into contact with the ground, and receive the impression thereof, while others, as the horny sole, are not at all adapted for this purpose: the object of it being evidently that which has been described by Professor Coleman, namely, to receive the weight imparted to it from above—to yield to that weight, and thereby operate as a spring in progression. The projecting substance at the posterior part—the *frog*, as it is commonly designated—we find to be composed of a horny mate-



rial, more elastic in its structure than any other part of the hoof. It is so situated that, in the natural gait of the animal, unprotected by a shoe, it is liable to be brought into contact with the ground at every step; but, considering the hard state of the roads on which the horse is compelled to travel, it is sometimes subjected to too much battering, while, on the other hand, from the great elevation of the heel of the shoe, it is frequently altogether deprived of the natural stimulus to its healthy secretion, namely, pressure from below, and, consequently, this part of the hoof of the aged horse is rarely or never found in its perfect state.

Thus again we see that Nature never errs. She always forms an organ for a specific function; and it is necessary, in order to keep it in health, that it should be called upon to perform that function. A part is just as liable to become diseased in consequence of not being used for the purposes for which Nature designed it, as it is from being called on to do more than she has destined it to perform. These, in fact, are the two grand causes of the structural and functional derangement to which the animal body is subjected. This part of the foot of the horse—the *frog*—bears a striking analogy to the under-surface of the foot of most other hoofed animals, having no concavity of sole. It is an elastic, yielding cushion. I am not now going into a full description of all that I could state to you respecting its peculiar functions, so intimately connected with the economy of the animal; I merely wish to impress upon you the importance of its convexity below, and the necessity of its receiving pressure from the ground in order to keep it in a perfect state of health. With reference to the structure of the hoof of the horse and that of cloven-footed animals, we here see that Nature has not only conducted her arrangements in order to obtain perfection of the foot itself, but we shall be enabled to trace how beautifully, in the upper part of the limb, she has also guarded against injury. Here is the leg of a ruminant animal. Observe how different the bones of the knee are from those of the horse. There are not so many of them, and they are not so intricately constructed in their connexion with each other as to possess the same degree of yielding and moving action for the purpose of warding off concussion. Let us go below the knee. We perceive that the animal before us has only a single bone—the large metacarpal bone. This single bone receiving the weight of the knee conveys it to the parts below; and, having arrived there, we reach that peculiar structure which gives to this animal the additional elasticity of foot which he possesses over that of the horse. Thus we see the wisdom of Nature in the arrangement of the structure of these parts,—shewing us the non-necessity of that

peculiar arrangement of the bones of the knee which we meet with in the horse,—shewing also the non-necessity of the existence of the splint, or small metacarpal bones. Here they are not to be found; and they are not required, because of the great degree of yielding motion which exists from the singular arrangement of the lower part of the extremities of this animal. In the horse, however, considering his great weight and his single foot,—although we have, as Professor Coleman used to observe, perhaps five hundred springs on the inner surface of the wall,—bearing in mind all this beautiful arrangement in the foot itself, and the elasticity of the hoof, yet it was also necessary that there should be additional elastic agents placed above; and these are found in the bones of the knee, and in the development of what are called the small metacarpal bones.

With reference to these bones, I must detain you a few short minutes for the purpose of alluding to the opinions of a very eminent physiologist; for, with all due deference to him, I must contend that he is in error with regard to their use. Sir Charles Bell, in his excellent work on “the Human Hand,” and whence the diagrams before you have been taken, attempts to shew that the use of the splint bones in the horse is merely for the purpose of acting as a lever, by throwing out the leg, and thereby mechanically assisting in its extension. He says nothing about the importance of these bones in bearing a portion of the superincumbent weight, and yielding to that weight, and thereby aiding the elasticity of the movements of the animal, which we, as veterinary surgeons, must consider to be all-important.

If there is one thing more than another which is calculated to expand our views on physiological subjects, it is observing seriously and attentively the cause, progress, and general effects of disease. Now I believe it is admitted on all hands, that the affection called *splent* most commonly takes place in young horses, shortly after the fetter is applied to the foot and the additional weight placed upon his back, by means of which the elastic springs which unite the small bones to the large one are strained, and thereby the disease produced. I think, therefore, that it is thus rendered distinctly evident that these bones were intended for the purpose of supporting the weight of the animal, and yielding to that weight, rather than merely to operate mechanically in assisting in the extension of the limb forward.

But with regard to shoeing, the exercise of this art is rendered necessary, from the fact of our employing the horse upon such roads as nature probably never intended him to travel upon; and also from our placing a weight upon his back, or using him in various ways for the laborious duties of draught work.

By what, then, should we be guided in the application of a protecting agent to the foot? The grand principle must be this,—that while we protect the lower surface of the foot from attrition—from injury that might be inflicted upon it by the ground—we at the same time allow it to perform its natural functions. We cannot, however, entirely accomplish this end: but it is requisite that we should, by investigating the anatomy and physiology of the organ, and by a due attention to the laws by which it is governed, arrive as near to it as we can. Of course, if we could protect the foot, and at the same time allow its elastic movements to go on with the same freedom and ease as if the shoe were not there, no ill effects would be produced. But, hitherto, no plan has been discovered by means of which a shoe can be placed on the foot without, in some measure, interfering with its functions, and, therefore, it is our duty to examine well the peculiar form of each horse's foot brought under our notice, and apply such a shoe as is most calculated to enable him to perform his progressive functions unfettered, and there prevent the occurrence of numerous diseases, which are too frequently the result of the employment of an ignorant artisan in this particular department of the profession.

Having thus briefly directed your attention to the subjects of anatomy and physiology, we are necessarily led to pathology, or that division of medical science which treats of disease.

And what a wide field is here open for our research! Our patients are unable to express by words what they feel; and it may be truly said, that, consequent upon this, the veterinary surgeon is required to exercise more minute investigation, and to evince more tact and discrimination than the medical man, in order to detect the existence and to ascertain the nature of disease; yet, on the other hand, it must also be admitted, that they never dissimulate, but by *true* symptoms, rarely misunderstood by the attentive and observant practitioner, point out the seat of the malady under which they are labouring.

I feel, however, that it is unnecessary for me to dwell here. I shall be content to leave this subject in abler hands. Professor Sewell will deliver the lectures on Pathology and Practical Surgery, and we shall all hail with pleasure the period when he will again be enabled to resume the duties of that exalted station which he has so long held in connexion with the advancement of veterinary medicine.

There is one division of this part of your studies in reference to which, probably, I am the individual by whom your attention must be called to it, and that is, *veterinary jurisprudence*. It is a subject which, hitherto, in my humble opinion, has not received



its due share of notice and study in this Institution; and as it is my duty daily to go round the stables of the College, and give such clinical instruction as the cases present, I shall at those times take frequent opportunities of adverting to the subject of veterinary jurisprudence. It is highly important, because upon the knowledge you evince with regard to it your professional position will often very much depend.

You are frequently called upon in a court of justice to give your opinion, not only with reference to the existence of disease and its nature, but you must explain to the jury the probable length of its standing, and the present and future effects of it. You must say whether it is likely to be attended with only temporary or with permanent evil—whether, in fact, it may justly be considered as constituting that state which is designated in law by the term *Unsoundness*.

I am inclined, Gentlemen, to attach due importance to every branch of your studies. No distinction, however, can be made, for they are all most intimately connected with each other.

Of what use, I would ask, would a knowledge of anatomy, physiology, and pathology be to the practitioner without an acquaintance with the means of cure? This leads us to therapeutics, or that division of science that treats of the application of remedies.

Here the twin divisions of chemistry and *materia medica* must be dwelt upon; and, happily, the time is come when they have been considered as deserving a place in your alma mater.

It would be a piece of supererogation on my part were I to take up your time in advancing any observations on this subject. There is one who is most able to teach this division of science, whom I am pleased to see before me now, and who, although I have known him long—for we have been labourers together in the same field for many years—I have never before viewed in the same pleasing light as that in which I can regard him at the present time. He is now altogether free and unfettered in his position. He will thus be enabled to exercise the full energy of that mind, I would say that *great* mind, which he possesses, for your advantage. I allude to Mr. Morton, and on Wednesday next you will have an opportunity of hearing him in this theatre deliver his introductory lecture, at twelve o'clock.

And now to you, my young friends, my junior pupils, I would venture, without giving offence, to offer a word of advice previous to parting. Punctuality is a most important thing to be observed. Appointments are debts. There is a specific hour when certain instructions will be given at this Institution, and when the Lecturers will be found at their post. I trust, Gentlemen, you

will never have occasion to complain of the want of punctuality in your preceptors; and if you have not, they have an equal right to look for punctuality in you: and when you do occupy your respective places here, you should remember and deeply feel that you do not attend our lectures merely as a matter of duty which must be got over, and then retire to some public place of amusement, where you will forget almost every thing that has been said.

It is not to be supposed that, by mere attention to lectures alone, you can become competent in the art on the study of which you have entered. In fact, the novel mode of education by means of lectures is a very questionable one with regard to obtaining practical information; and therefore it is that at all times I am anxious to meet with you, to mingle with you, and contribute all in my power to promote your knowledge out of the theatre, as well as in it. Nevertheless, lectures are a necessary adjunct. The lecturer has to point out the way. He has, as it were, to steer the course, and to direct the mind of the pupil. Then let the pupil, after having attended on the lecture, retire to his study and peruse the sentiments of some author on the subject. Thus a deep impression will be made on his mind, and the information which he derives will be useful to him in after-practice.

There is one department of your study, Gentlemen, which, of all others, I cannot too forcibly impress upon you the necessity of your diligently pursuing—it is, practical dissections. Without them you will never be worthy of the name of anatomists; you will only be dabblers in the science; and its sublimity will be lost to you. *You must dissect!* You may have excellent memories, that may enable you, like a parrot, to answer Yes, or No, or to state the name of a part in accordance with what you may have heard from others; but you will be altogether wanting in a knowledge of useful and practical anatomy unless you dissect. You must impress upon your mind's eye what you have seen on the dissecting-table; and then, without encumbrance, you will be enabled to carry about with you an unerring index, which you can at all times refer to with confidence.

It is not to be presumed that, in this theatre, where, probably, some of you will be at a considerable distance from me when I am speaking of the minute arrangement and function of parts, that I shall be able to impress them upon your minds, so that you will fully understand all to which I shall endeavour to draw your attention. But you should go from this to the dissecting-room; you will there have the subject before you, and you will learn for yourselves. In this pursuit you will be assisted by a very able coadjutor of mine,—by one for whom I have a great respect

individually, and to whom, I am sure, you will all of you, at the close of the session, be much indebted. I refer to Mr. Barth, your Demonstrator. He will demonstrate to you every morning at ten o'clock, and will give you a practical illustration of the arrangement of some part or parts of the animal frame. He will at all times be most ready and willing to assist you in the pursuit of that division of your studies.

With regard to reading—of course, you must be aware that it will be necessary for you to read, and to study well the opinions of various authors on different subjects. It will, in fact, be requisite for you to possess the works of certain authors as pocket-companions, in order to enable you to pursue your studies with advantage. If I may be allowed to mention the names of a few authors whose writings I consider it highly important for you to possess, and more especially to use while occupied at this Institution, the first to which I should direct your attention would be Mr. Percivall, who has written a very excellent work on “The Anatomy of the Horse.” He is also the author of “Lectures on the Anatomy, Physiology, and Pathology of the Horse.” Mr. Percivall has been a valuable and honoured member of the profession during many years, and has contributed much to its advancement. His writings have tended to disseminate a great deal of useful knowledge among the junior practitioners, and thereby he has done much good. The profession at large owes him a deep debt of gratitude.

Mr. Morton has written “A Manual of Pharmacy,” and “A Toxicological Chart of the Effects of Poisons, and their Antidotes.” These it will be important for you to possess: they are productions excellent in themselves, and you will have occasion frequently to refer to them.

Blaine's “Veterinary Outlines” deserve your serious and frequent consideration. I would not, however, advise the pupil to confine his observations to the anatomical part of them, because in many respects his nomenclature differs materially from Mr. Percivall's, and that which is usually taught here; but his work, generally speaking, contains much useful, scientific, and well-digested matter, and the time you will spend in its perusal cannot be otherwise than attended with much profit. Blaine's “Canine Pathology,” also, should have a place in every veterinary surgeon's library.

Then I come to one to whom we must look—and I speak it with sincerity—as indeed a grand star of our profession—one who has laboured more assiduously in the field of veterinary knowledge than any man living. I allude to Mr. Youatt. I have a peculiarly pleasurable feeling in speaking of Mr. Youatt. And



why ? Because I was one of his pupils ; and I cannot but feel deeply that the period has arrived when my old preceptor hesitates not to come and listen to me, and I know full well with every kindly feeling.

Mr. Youatt is the author of many excellent works ; and, Gentlemen, after what I have stated to you with regard to the importance of extending your investigations to a knowledge of the anatomy, physiology, and pathology of all domesticated animals, where can I refer you for information on these subjects unless to the literary labours of this gentleman, as contained in certain volumes published by the Society for the Diffusion of Useful Knowledge, on the Horse, Cattle, Sheep, &c. &c ? He is also the Editor of *THE VETERINARIAN*, a standard work with us.

The late Professor Coleman has written some works on the foot, shoeing, &c., which I would advise the pupil to read.

To Mr. Bracy Clark, also, we are indebted for many scientific works on veterinary subjects. Mr. Turner, whom I have the honour to class among my friends—an excellent man and a first-rate practitioner—has written a work on Navicular Disease, the result of a long and steady application of his mind to that particular subject. He has also recently published a volume of *Philosophical Experiments*, in which some extraordinary facts and reasonings are adduced.

My namesake and fellow-pupil, Mr. W. C. Spooner, has recently presented us with a volume on the Anatomy, Physiology, and Pathology of the Foot of the Horse, &c. He has entered very much into the science of his subject, and contributed greatly to the advancement of our art. I shall not allude to other authors : I have merely adverted to those works which are more especially intended for the perusal of pupils.

I have now only to call your attention to one other subject, an attention to which, I think, you will also find of great importance, and that is, the Veterinary Medical Association, a Society which holds its meetings every Tuesday evening, in this Theatre, and is founded on the principles of mutual instruction. You will there have an opportunity of freely and openly expressing your sentiments : and, although I shall be present at most of your meetings, and may sometimes possess opinions different from those you entertain, you need not hesitate in advancing them. I am delighted to hear the free and ingenuous opinions of youth, and have often been much improved by them. Do not by any means allow the idea to be impressed upon your minds that, as a matter of course, you must think as I or as any of your teachers think. We may occasionally differ from each other on points of minor importance. I do not hesitate to express my

thoughts although they may be opposed to those of my highly-respected colleagues and friends. Our difference on scientific questions does not at all interfere with our sentiments of regard for each other. It will, however, be required from you to know the opinions of all your teachers; but you may also form distinct views of your own. It would be absurd for us to say that you *must* think with us. Believe me, Gentlemen, it is only on the wide extension of thought and freedom of action that we must depend for the improvement of all science—the advancement of all knowledge.

I beg to thank you for the kind attention with which you have listened to me; and on Thursday next, at twelve o'clock, I shall again have the honour of appearing before you.

The Theatre was crowded by pupils and gentlemen already in practice, by whom Mr. Spooner was frequently and enthusiastically cheered.

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We now present to our readers the two introductory Lectures on Chemistry delivered by Professor Morton at the commencement of this session. Portions of them may be found in the history which we were permitted to give of the proceedings of 1839 and 1840, and most excellent and useful they were: but a mind like his was never at rest when endeavouring to accomplish an important object, and he has altered and improved them until they are truly worthy of him and of the subject of which he treats. He will kindly forgive us for omitting the division between these lectures, for we were pressed for time and for room; and no student, we are persuaded, will tire in the perusal of matter so interesting as that which the following pages will contain.

The Professor thus commenced:—

AFTER the eloquent proemial address delivered on Monday last by your excellent preceptor, and my esteemed colleague, Mr. Spooner, words of mine will be but as the pattering of drops of rain upon the mighty expanse of waters, or as the low murmurs that succeed the loud-pealing thunder-storm. But, as a little rivulet is sometimes seen, apart from the mountain torrents, in its meanderings to irrigate and fertilize the soil through which it passes, so may I hope that, by your co-operation, the seed which from time to time may be sown here will be caused to germinate and grow; and if so, we shall see, “first the blade, then the ear, and then the full corn in the ear;” and a rich and an abundant

harvest will be the reward of our united labours in this division of the field of veterinary science.

Happily, on entering upon that section of your studies in which it is my duty and privilege to offer you assistance, no lengthened exordium is called for. Well-turned periods and correctly chosen and euphonious words are both alike unnecessary. A simple and ungarnished statement of facts—the inculcation of the principles of a science fraught with interest, and of incalculable value in its application, and to you especially of the highest importance in after-life—is all I have to lay before you.

Sensibly do I feel the weight of the responsibility that attaches itself to my vocation; but my best endeavours shall be made satisfactorily to acquit myself, and I trust that, at the close of the session, we shall have cause to say that we have been somewhat profitted by our labours.

It is the seeming misfortune of all the sciences to abound with technicalities—peculiar terms employed to express certain things; and although these have been spoken against by many, the fact is, that terms thus employed, and which are chosen from the dead languages, are often both more explicit and shorter than those which could be supplied from most of the living ones. In addition to this, there must be taken into account a circumstance that appears to be too often forgotten—that there is not a business or a trade which has not its peculiar terms; and with these it is necessary for the learner to become acquainted before he can be considered proficient in his calling. Why, then, should the sciences be exempt?

As I am not required to expatiate on the advantages derivable from general knowledge, I proceed at once to observe, that the modes by which information is communicated to the mind are many; but among them there is, perhaps, none so pleasing, and certainly none more impressive, than an attendance on lectures.

This form of conveying instruction appears to have been practised from the very earliest periods. The antient Jews sat while teaching; and many sects among the Greeks derived their names from the custom adopted by them while *orally* explaining their doctrines to their disciples, as the Peripatetics; while others assumed the name of those whose philosophic views they favoured, as the Platonists, the Epicureans, and others.

Now, it may be asked by the student whether, since lecturers obtain by far the greater amount of their knowledge from books, and by the same means often communicate what they know, whether reading would not answer all the purpose? The reply is in the negative, and for these reasons:—here I quote in part, but the opinions are in strict consonance with my own.



Firstly, Any one who is at all in the habit of reading must be aware that books contain much matter which, although necessary to render them complete, is not necessary for a student to know. This matter, too, is often the most difficult to be understood. The student meets with it, and he finds that he cannot master it. He tries, but in vain; and if he has no friend to help him, he throws the book aside in despair.

Secondly, The information necessary to be gained is often scattered over a wide extent of surface. Now in lectures the speaker performs for the student the arduous duty of gathering the honey from the various flowers of science, and he presents it to him freed from the impurities of error and the complexities of imperfect description.

Further, when different views are taken of a subject by different authors, he condenses them, discovers their agreements and discrepancies, argues on their probabilities, and offers those which will best bear the test of reason. Surely, no one can deny that these are advantages.

The teacher likewise exhibits to his class the different substances that are described, and thus they obtain definite notions of the agents employed.

Experiments are also performed, and the practical knowledge which is thus acquired can never be realized by the mere reading of books; for mere words often leave no impression behind them—they are as evanescent as the tints of a rainbow, and vanish as soon as the sonorous vibrations which produce them cease to impinge upon the ear. Not so with experiments. These impress the mind with the truths of the science dwelt upon, and they inculcate those principles which time *cannot* efface; IF SO BE—I repeat it, if so be—on the part of the student there has been that earnest attention which the subject merits.

Professor Thomson has truly said, “experiments, when seen, are the most convincing proofs of the propositions of natural philosophy. They have, besides, a power of arresting the attention of the indifferent observer by a display of striking and extraordinary phenomena; and they awaken curiosity to search further into the nature of the subject which they illustrate. In pursuing the inquiry, other appearances, equally impressive as the first, will present themselves, and augment the ardour of research; and thus, many persons, who by no other means could have been induced to follow out a long chain of reasoning, are led step by step to the knowledge of general principles, and obtain possession of the most useful and most brilliant truths in science.”

It has always appeared to me, that while much may unquestionably be gained from attendance upon lectures—more,

perhaps, than from any other mode of instruction *alone* considered,—yet all the lecturer can do is to offer to the student an *outline*, which is to be filled up by means of subsequent study. *Lecturers, then, are but adjuvants to the acquirement of knowledge*; and it is alone by serious thought and reflection that solid information can be effectually engrafted on the mind.

How many commit a sad error here! They think that, because they have sedulously attended the lectures, they have done all that is or can be required of them to do. Fatal mistake! and not often found out until it is too late.

“Man,” says Paley, “is a bundle of habits.” How necessary, then, is it that we should be rightly directed at the onset of our career in life, in order that the good may preponderate over the bad! for the saying is a true one, “as the twig is bent, so grows the tree.”

Next to an attendance upon lectures as a means of acquiring knowledge certainly comes reading. And here let me offer you a word of advice. Never come before the lecturer with your head stored with recently acquired information on the subject upon which he is about to treat. You will do well to remember that “a vessel which is full can hold no more.” Beyond this, the act will engender carelessness and indifference during the delivery of the lecture. The matter may appear familiar to you from your having just read about it, and the observations which may fall from the lips of the teacher will then cease to interest or make any impression, and, consequently, as you have only acquired a superficial knowledge, it will pass away as the morning cloud or the evening dew.

I may, perhaps, be allowed to add another reason. Carelessness in one will induce carelessness in another. This will manifest itself in the smile, or the thrust with the shoulder or the elbow, the pointed finger, or the titter at some trifling event—perchance some unfortunate blunder which the lecturer himself might have made, or that over which he had no controul,—the failure of an experiment.

Think then, Gentlemen, what are his feelings!—his mind being absorbed as it were in his subject—his whole thoughts were concentrated there—by this one act of yours his fears are awakened, and he becomes distracted and perplexed. Others as well as himself are annoyed; and that by an act, perhaps, on your part unintentionally committed.

My advice, therefore, is to read the subject over thoughtfully *after* you have heard the lecture; of this being assured, that the one without the other is of little worth.

Next to this I would place mutual instruction. I am pleased

when I see students associate together, and good-humouredly 'badger' each other. "Iron sharpens iron," Shakespeare has said, and by attrition often a genial flame is kindled.

I feel convinced that the benefits thus obtained are many. There is awakened a spirit of laudable emulation, while a love of excelling excites each party to the performance of greater and nobler acts. At the same time, the information thus gained is pleasantly gained, and permanently gained, too, because it is unaccompanied by restraint and formality. This system, I must confess, has my unqualified approbation.

Reverting for an instant to lectures, I would say that the division of labour which is necessarily produced by them has also its advantages. Each instructor devotes himself to the subject he has to elucidate. There is no clashing of pursuits, no interference; and, the mind being directed to one object, rich stores of information are drawn forth which otherwise might lie for ever concealed. Beside this, different minds have different inclinations. One person delights in the development of phenomena; the other loves to speculate on their causes. One pursues with avidity the truths of this branch of science, while another experiences gratification only in the pursuit of a seemingly opposite one; yet "all are but parts of one stupendous whole," and it is this happy variety of inclinations that advances general science.

Medical chemistry is but a branch or division of general chemistry; but the same remark will not apply to *materia medica* and therapeutics, that division of medicine which treats of the application of the substances that are employed for the eradication or alleviation of disease; and yet the principles of this division of science cannot be acquired without some acquaintance with those of chemistry. It is thus shewn that divisions, even here, may be advantageously made—that the principles of chemistry, as far as necessary to elucidate medical science, may be taught without taking that beautiful subject in its wide and extended bearing: nevertheless, my opinion is, that the time is not far distant when, in its *general* application, the science of chemistry will be taught here; and then, perhaps, *materia medica* and therapeutics will form a distinct course, as is the case in other schools.

Thus my intentions have been faintly developed. It will be my endeavour, first, to make you conversant with the leading principles of chemistry, but only as far as they are necessary to elucidate the science of medicine; hence this division may be properly called *medical chemistry*. I shall not, however, refuse myself the gratification of dwelling from time to time upon many of the phenomena of nature—I mean, of course, such as receive



alone their explanation by a reference to chemical laws. There may be many of the processes in the arts which will also call forth some comments. I do so, because I am decidedly of opinion that, as professional men, you ought not to be ignorant of these things; and I am sure you will estimate their worth in after-life.

In the second part of my course, I shall introduce to your notice the various compounds derived either from the organic or inorganic kingdoms of nature, and also those that are formed by art, which being employed as therapeutic agents, become, in the hands of the educated and scientific man, means to alleviate some "of the ills that flesh is heir to." I have been, during a somewhat lengthened period of probation, conversant with some at least of the wants and general feelings of veterinary students; and I cannot use sufficiently strong terms to condemn the practice of those idlers—those drones in the hive—who declaim against the acquirement of *general knowledge*, which they do on the grounds (as they say) that it will be of no use to them in their professional avocation.

Surely such persons never gave themselves the trouble to think for a moment upon the subject. They have never reflected on what must be the necessary consequence of ignorance of those things, which, if they do not bear directly, do so indirectly upon the profession of which they are, or hope to be, members. They can never have asked themselves the question, Are we likely to be proficient in any one science without some acquaintance with the collateral sciences? This may be accepted as an axiom,—there is not a science that can be said to be isolated. Each, as it were, holds the other by the hand, and thus they contribute mutually to assist each other. For instance, I would ask, How can the beautiful and intricate mechanism of the animal frame, with its multiplied pulleys and levers, be understood without some acquaintance with mechanics? Do not the laws of optics afford us aid in comprehending the function of that admirable apparatus the organ of vision? Nor are those of acoustics at all less necessary in our investigation of the working of that beautiful machinery which Nature has enclosed in rock-work, constituting the internal ear; by which we listen to the counsels of a friend, or are warned of the intentions of an enemy.

Again; the principles of pneumatics are in operation every time we breathe, and those of hydraulics in the circulation of the blood; so that of these divisions of natural philosophy the medical student should not be ignorant, since the healing art, more than any other, calls forth the energies of the ever active mind. I do not hesitate to say that the information of the

veterinary surgeon is required to be even more varied and general than that of the human surgeon, for he is without those aids which the latter receives while pursuing his calling. *His* patients have not the power of speech by which they can tell him their sensations ; nor can they point to the substance of which they may have partaken, and by which the evil has been effected. They cannot expose the cruelty to which they have been subjected, nor single out the miscreant who has been guilty of it. Neglect must be conjectured, and covert acts made known by symptoms only ; and these the *educated and observant* man can alone detect.

The medical man, however, -- practising which branch he may, -- should have the basis of his knowledge laid in the physical sciences. They are the foundations on which to raise the superstructure, and this will be enduring in proportion to the solidity of the information he has acquired. The shallow pretender -- for he is such who has neglected to cultivate his understanding -- will be as a man who has imprudently built his house upon the sands. He cannot endure the storm : and throughout life it will be found that he alone can, who in his youth has been anxious to acquire those principles on which he may securely rest ; these being based on investigations into Nature, and a correct observance of her laws. What, I would ask, is right theory, but a knowledge of correct principles ? and sound practice is only the application of it. Whence it follows, that he is the best practitioner who is the best theorist ; for although the beginner may not evince the tact which the experienced man does, yet time will bring this about ; on the other hand, it follows as a necessary consequence, that he who is false in theory is wrong in practice.

Should it even be the case that you are never called upon to give a reason why you have adopted such a course of procedure, is there not a glow of pleasing satisfaction, which on reflection pervades the mind, arising from a conviction that you are right ? Contrast this with the doubts and fears that must arise in the breast of an ignorant man, and then say if there is no benefit to be derived from knowledge !

From the cursory observations that have been made, we deduce the value and importance of an acquaintance with the sciences generally, and more especially with that designated chemistry. And this is to be viewed, not in reference merely to the drugs which you may employ in your practice, but in its application to agriculture, to soils, to the growth of vegetables, to the arts, and to life ; for although the animal machine is not a laboratory, there is no questioning the position that chemical

laws obtain in it, although they are under the control of the higher principle of vitality, designated life.

Sir J. Herschel has said, "The science of chemistry," to a division of which it is my intention to direct your inquiries, "is full of the greatest beauties, and ranks second to none of the sciences in value. Like them, it had its origin in human weakness, folly, and even absurdity. Its beginnings were feeble, nay, almost contemptible; and the discoveries of its truths were only made through a lengthened series of mistakes and failures. But it has long since disencumbered itself of the trammels which bound it, and, having become an experimental science, it now rests only upon facts. Speculations are discarded, and demonstrative proofs alone accepted; hence it is placed among the exact sciences, being a science of number, weight, and measure; while it has effected more good for mankind, taken in their relative situations, than any other branch of natural philosophy: nor is there a physical science which does not receive some assistance from it."

The *object* of chemistry is the investigation of the laws which govern the constitution of bodies—the properties of the elements which make up the mass, the integrity of which is maintained by a force opposed to chemical action—the explanation of the changes which take place when substances dissimilar in their nature are brought together, and by which their mutual decomposition is effected and new compounds are formed;—and, lastly, the resolving of a compound body into its constituents.

The phenomena which attend chemical action are oftentimes wonderful, and sometimes inexplicable. Masses of matter may remain together sluggish and inert until the chemical affinities are exerted, when, all at once, the most violent and unexpected action is produced, often alarming the incautious, and which has been compared to spirits evoked by the spell of the magician. The result is the formation of compounds altogether dissimilar from the substances thus operated upon.

At other times we perceive no visible effects. Silently and unseen the process goes on, but the result is the same. Some new principle has been evolved which may be rendered useful in a variety of ways, and these too numerous to mention. Now the immediate cause of all this is unknown, and, for aught we can tell, may ever remain so. It is only the effect that we witness. This, however, is no fault of the cultivators of the science of chemistry, who have comprised in their list men of the highest and most varied talents and industry; but of the inherent complexity of the subject, and the infinite multitude of



causes which are concerned in the production of every, even the simplest chemical phenomenon.

I now proceed to speak of some of the benefits that will be obtained from the study of chemistry. It is true, that the philosopher loves science for the truth's sake; but others will make inquiries into its usefulness; nor can this be objected to, since, before any one undertakes the study of a science, he should have a well-grounded hope that the attainment of it will repay the labour of the investigation. Well has the learned Boyle observed, that "nothing is unworthy of investigation that has not been thought unworthy of God to make;" and surely there is no pleasure equals that of scientific research.

I will not expatiate on *all* the advantages that result from this beautiful and useful science. It is *beautiful*, inasmuch as its operations afford pleasure to the senses, while it tends to elevate the imagination by the development of the secrets of Nature, lifting the soul from Nature up to Nature's God! And it is *useful*, because it improves the necessities and adds to the gratifications of life. It likewise contributes, more than any other science, to unfold to us the laws by which the universe is governed and which laws have continued in force since from out of chaotic darkness and confusion light and order first came.

Many of the sublime phenomena with which Nature presents us are alone explicable by a reference to chemical laws.

The awful earthquake, and the devastating volcano, in all probability, are but the results of intense chemical action.

To employ the language of an interesting writer, it may be said that, "From the clouds which roll in interminable masses over our heads, to the smallest grain of earth that is trodden beneath our feet, all are alike dependent on some chemical law for their existence under a definite and sensible form; and the chemist is as capable of explaining the former as the latter, while he is equally interested in doing so; for to him there is food for inquiry and contemplation in the smallest and most insignificant objects which can be presented to his senses. He sees that a single drop of water, or the ocean—that a spark of fire, or a mass of destroying lightning—are dependent for action on the same laws, and generated by the same cause."

The chemist, then, has to investigate matter in all its various forms. The bodies which are around may appear innumerable, but he reduces them to a comparatively few simple or elementary substances; and he proves that, although their size, figure, and colour, may differ; though some may be solid, others fluid and gaseous—some may possess hardness and others softness—some

are visible and others invisible, yet all are made up of a few only of these elementary substances, the differences which appear depending principally upon the proportions in which they are united. When they have performed their uses in these forms, they enter into new ones; so that not a particle of matter is ever lost, or has need to be formed afresh. All that exists now existed at the creation, and will exist till time shall be no more. The beautiful varieties, then, of form and properties which are presented to the senses are only the result of an interchange between these ultimate particles.

We have before said, that chemistry teaches us the constitution of the earth we live on. Its soil, we perceive, is destined for the support of plants—of plants which clothe its surface in rich luxuriance, and it affords them nutriment. These, not possessing the power of locomotion, become fit food for the various tribes of animals which are placed upon it; and these, in their turn, become food for him who is proudly styled the Lord of the Creation. Hence we perceive the links which run throughout the chain of Nature; and it follows from this, that man, animals, and vegetables, are composed of similar materials to those which constitute their common parent—earth; nor is there any difficulty in ascertaining what these are. But, although the chemist may analyse the animal frame, separate its constituents, and exhibit them, thus making known their various properties, yet he *cannot re-unite them*, so as to cause them again to exist in the state in which they did prior to their disunion. It is alone the refined operations of vitality which can effect this. By this is at once shewn a clear distinction between the powers of life and chemical action.

We need not confine ourselves to the animal kingdom alone as illustrative of our subject: the same reasoning will apply to vegetable life. The chemist cannot form a grain of wheat nor a blade of grass, yet he can tell you the constitution of each. He cannot make a particle of starch or of sugar, although he well knows the exact proportions in which the oxygen, carbon, and hydrogen, exist in them. Here, then, his power ends. He can destroy the form and structure, but not create the substance; and he is compelled to confess that Nature, in her operations, presents us with one vast laboratory, where mechanism is subservient to chemistry; where this is the agent of the higher power, vitality; and where even this ministers to the more exalted faculties of sensation and of intellect.

We have thus traced the wonderful adaptation of plants and animals to each other; and so great, indeed, is this, that the one could not exist without the other. But, besides this, there



must be taken into account the influence of the atmosphere which surrounds the earth, and which we and all other sentient beings inhale. This, in fact, is the agent or medium by which the two grand kingdoms are made reciprocally useful. To the most superficial observer it must be obvious that the air is necessary to the maintenance of the life of animals and vegetables; but some little acumen is requisite to explain how it is so. This an application of chemical laws makes clear.

The atmosphere essentially consists of one-fifth of a peculiar gaseous substance called *oxygen*, and four-fifths of another peculiar gaseous substance called *nitrogen*; and these are mechanically mixed together. This may be proved by a simple experiment. I take a graduated gas jar, taper, trough, phosphorus, stand. You perceive that the taper burns freely in this vessel of air. I will remove the oxygen from it by burning a portion of phosphorus in it, and with which it will rapidly unite. By this act we see the proportions in which the two gases are united, for the water has ascended up the vessel about one-fifth of its dimensions. In other words, the oxygen has been removed and the nitrogen remains.

We will now see whether the taper will burn in this gas. It will not. Hence, then, we infer that it is unfit for the respiration of man and animals. To the oxygen the air owes its activity, its power of supporting combustion, and of purifying the blood of animals. Since, then, it is required for these purposes (and there are many more hereafter to be spoken of), it must be constantly undergoing a change, and some source must exist whence it again can obtain oxygen; for it has just been said, that no formation of new matter ever takes place.

This source is the vegetable world. Animals, by respiration, *decompose* and *vitate* the atmosphere; plants purify it by the same act. Animals *exhale* carbonic acid gas, a highly deleterious compound; plants *inhale* this, retain the carbon, which, by assimilation, they render a part of themselves, and emit the oxygen in a state of great if not absolute purity: and thus two of the grand kingdoms of Nature become conducive to each other's benefit.

Thus, in the neighbourhood of marshy districts and stagnant pools, during the fall of the leaf, there is generated a miasm, which induces nervous debility (this, in all probability, being some of the compounds of carbon or sulphur with hydrogen). Persons living contiguous to such places become hypochondriacal. They labour under great dejection of mind, and their despondency is occasionally so great, that they are both unwilling and incapable of undertaking any thing which requires mental exertion. Hence



it has been said, that in the month of November the greater number of instances of suicide take place. Here, then, we see chemical laws in operation, but only after life has been withdrawn from the plant, and by chemical means their effects may be counteracted; or having, by the aid of chemistry, a knowledge of the cause, methods may be resorted to in order to remove that which is prejudicial.

It may be as well here to repeat, that the laws of chemistry are subordinate to those of vitality; the last having, at least, a controlling influence over *organic* life, while, in *inorganic* bodies, chemical laws alone prevail. The compounds of hydrogen and carbon, just spoken of, could not have been formed unless life had ceased in the vegetable. Then it was that other unions took place between the elements of which it was made up, and that which once contributed to beauty and usefulness was resolved into a poisonous gas.

Chemistry instructs us in the composition of water, and how it is available to the many uses to which it is applied. This agent can, to demonstration, be proved to consist of but two of the elementary substances, oxygen and hydrogen, chemically combined.

It has been pertinently asked, What would happen if the qualities of these two important fluids, air and water, were to undergo a change? For example; if either were to become sour or sweet, heavier or lighter, or, indeed, any thing but what it is? What, if it were to acquire odour or colour, or become opaque? If either of these changes, slight as they may appear, were to take place, the whole of the beautiful order of Nature would be at once destroyed. But we may advance a step, and ask, What would be the consequence if the acid which exists in the saline matters of the ocean were to be at once set free? It would instantly combine with the limestone of the rocks, which form the boundary to the expanse of waters, and seem to say to it, "thus far shalt thou go and no farther," and cause them quickly to disappear by undergoing solution in the sea, which would then be rendered totally unfit for the sustenance of the finny tribe; while the carbonic acid gas evolved would prove no less fatal to man and animals living on the land.

I could, under this head, much extend my remarks, for these are a few only of the many proofs that might be adduced of the advantages derivable from a knowledge of chemistry, as explanatory of natural operations.

But we will descend from this, our seemingly high standing, and review some of the advantages resulting from the application of the principles of this science to the daily acts of life.

We will first advert to the arts, and take cognizance of the working of metals, on which so many of the other arts depend. The improvements introduced here since chemical laws have been studied, are scarcely credible; while the profits have been doubled, from the economizing of fuel, and the employment of what was formerly considered to be mere refuse. In like manner the of arts dyeing, tanning, making of porcelain and pottery, have been much benefitted by the application of the principles of chemistry.

It is also incontestible that agriculture has received incalculable good from its application, arising from the labours of Sir H. Davy and others in this division of science. Especially would I direct your attention to the admirable work of Seeley on this division of our subject.

The master mind of our countryman, Sir H. Davy, also produced the safety lamp; an instrument with which the miner fearlessly walks the galleries of the mine filled with the destroying fire damp, and, plunging it into the inflammable compound, renders it even subservient to his use, while he himself is unharmed. By chemistry, also, another equally destructive compound, the choke damp (so called by the miner), may be rendered perfectly innocuous. This is found to be carbonic acid gas, and its removal is effected by means of moistened quick-lime, which readily absorbs it.

It has been by the application of chemical science that our streets and houses are now illuminated by a gaseous fluid, which, had it been proposed but a century ago, would have been laughed at as chimerical, and the man who broached it treated as an enthusiast, or considered an idiot or a madman. Yet this gaseous compound, similar to that which the miner dreads, and which has been the cause of death to thousands, we have now traversing our streets, and finding its way even into palaces, where it is made to undergo combustion, and rival in brilliancy the twinkling stars in heaven's high canopy.

But even the common necessities of life cannot be obtained without the aid of chemistry, while almost all our luxuries are dependent on it. Thus the operations of cooking, brewing, making of wines and bread, and the distillation of spirit, are so many chemical operations. Even the every-day act of obtaining a light by prometheans or lucifers is a chemical operation.

It is likewise shewn in the abstraction of nutriment from bones, sugar from rags, and bread from sawdust; so that the probabilities of a famine are by the aids of science reduced to zero.

Even the peat from the bogs of Ireland has lately been converted into a material for the making of paper; and from the

once-thought worthless sea-weed a substance is obtained, which, by union with flint, forms that useful article glass, or, when combined with fatty matters, soap. The hoofs and offals of animals yield another of these alkaline bodies, highly useful in medicine, as we shall have occasion to shew you hereafter; while the fairest of Eve's daughters use it as an exhilarating perfume, knowing not whence it is derived.

From our common table salt, an element is procured by chemic art possessing properties unequalled, perhaps, in value. By it our linens are bleached, and thus it conduces to our comfort and our happiness, and, as a medicament, it has the singular power of destroying putrid effluvia, which it does effectually, by at once decomposing them, thus preventing the access of disease and counteracting the cause of it. Before the advances which chemistry has lately made, perfumes were too frequently employed whenever a contagious malady prevailed, and thus the poison was rendered even more effectual in accomplishing its direful ravages; but, by the use of the elementary substance chlorine, it is rendered perfectly innocuous. Nor is this all;—its compounds, in the hands of the scientific man, relieve many of the diseases which are the common lot of mortals.

The advantages derived from chemistry in the application of its principles to medicine is a most important subject. Of the origin of the science of medicine we have not time at present to speak, but we shall hereafter have many opportunities of illustrating it.

Chemistry enables us to separate the active principles of vegetable substances from an immense mass of inert matter with which they are often united; and although the vegetable alkaloids have not as yet been much employed in veterinary practice, nor even *generally* by the practitioner of human medicine, on account of their expensiveness, yet, I doubt not, that in time other means of separation will be discovered than those which now exist, and then they will be extensively used; for we shall be enabled to speak almost with certainty of the action of the vegetable agent we are desirous of administering. At present, the activity of vegetables much depends upon the nature of the soil, the influence of climate, and its variations; and, more than all these, upon the mode of cultivation and preparation.

Many vegetables owe their activity to vegetable extractive, and this it is desirable to obtain isolated; for, oftentimes, the stomach, from the effects of disease, is unable to separate the active from the inert matter. Pharmaceutical chemistry assists us in effecting this. The operation of others depends upon the presence of an essential oil; and this one of the commonest operations of the



pharmacy enables us to set free. The same may be said of many other principles. Chemistry has likewise much extended our domain, and we now prepare other and, perhaps, more active agents from the mineral kingdom. I might refer you to the preparations of mercury, viz., calomel, and corrosive sublimate, which consist of the union of a metal with another elementary substance, chlorine. I might refer to the compounds of antimony, copper, iron, and zinc, and likewise to the concentrated and other acids, and to many other therapeutic agents, particularly to that very numerous class designated salts. It is to chemistry alone that we are indebted for almost all of these, since nature never furnishes them, at least not in sufficient quantity as to be available for the use of man.

By the aid of this science we likewise increase the potency of our remedies by a judicious combination of them; and here, more than is generally thought by the uninstructed, will you require a knowledge of chemical laws; for if, on the one hand, their activity may be increased by union, so, on the other, it may be entirely destroyed. Two energetic bodies may form by union a third perfectly innocuous; or two bland and inactive ones may give birth to another violent in action and even poisonous. As an instance of the first, we may take the union of the caustic alkalis with the mineral acids; of the second, the combination of cynogen with hydrogen; or of the metals with oxygen; and many other elementary substances.

I feel assured that it is the neglect of the inculcation of the principles of chemistry which has led to the introduction of such gross compounds as are employed by many calling themselves veterinary surgeons. Most of these persons—for I am not speaking of the educated veterinarian—are fond of the employment of a multiplicity of drugs, jumbling them together without any consideration whether the operation of one may not be counteracted by that of another; or whether chemical affinity does not come into play, and a new compound result from their union, the effect of which is the very reverse of that which they intended and desired to produce.

Thus you will hear of their incautiously mixing sulphuric acid with the fixed and essential oils, so as to form a stimulating compound termed black oils; and serious consequences have followed their imprudence. The combination of alum and sulphate of copper with chalk, as an astringent—the union of the acetate of lead and sulphate of zinc as a collyrium, not knowing the mutual decomposition which here takes place—the addition of tincture of opium to the Goulard's extract or diacetate of lead, for the same purpose, being perfectly unconscious of the fact, that the active

principle of opium is precipitated in an insoluble state, the morphia forming meconate of lead.

Many other instances equally as absurd might be adduced ; but I remember one so much to the point, that occurred to me when a boy, that I will relate it to you.

A village farrier, one of the old school, or, perhaps, no school, was desirous of ordering a stimulating liniment for a cow having inflammation of the mammillary gland. " Now, my lad," he says, " mix together some olive oil and some spirits of sal ammoniac (water of ammonia); shake them well, and add some of the oil of origanum—this of course—some laudanum, and a little oil of turpentine. Ay, that will do," said he ; " but stay, I fear it will not be *quite* strong enough ; pour in some oil of vitriol ; (sulph. acid), will you ?" I did so, and suffered for my temerity. I soon appeared in a delightful mess : the disengagement of heat was so great that the bottle burst in my hand, and I became covered with the farrier's most unchemical compound.

Now I need not say, that, had the man been the least conversant with chemical principles, he would not have made so strange a blunder as this ?

Chemistry will also enable us to distinguish medicinal agents from each other, when their external characters are similar. It will likewise empower us with the means of detecting the sophistication of drugs ; and if there are persons on whom imposition is more frequently attempted than on others, I do not hesitate to say they are veterinary surgeons. The druggists have long held sovereign sway here ; for when an article will not do for general sale, it is reckoned good enough for a horse, and is set aside for the compounding of horse and cattle medicines.

On these matters I am enabled to speak a little from experience. Those who are uninitiated may be surprised to hear that it is no uncommon thing for the dregs of tinctures to be preserved, and, with the waste and refuse matter of the warehouses, to be sent to the drug-grinder to form the compound powders so much employed by those of the old school. When these materials are unobtainable, the method adopted is this :—one part of the genuine powder of the roots or seeds is mixed with seven of meal or some farinaceous matter, and coloured and scented *secundum artem*. I believe that this Institution has been the means of these compound powders being almost, if not entirely, discarded from veterinary practice ; at any rate, they are never employed by the educated veterinarian, yet the deceptions still continued are many, and it behoves even *him* to be on his guard. This is the reason why he is advised to purchase his drugs in bulk, and as

they are imported. Let him also purchase from a druggist of respectability, and give a fair price for the article, and, then, he needs not to fear its adulteration. I have said the deceptions practised are numerous; thus, ginger and gentian root, and the various seeds, are almost always mixed with some other powders. But even should it be a genuine article that is sent to the mill, it is commonly such as could not have been disposed of in any other form than that of powder; and then the drug-grinder plays his part, and seldom fails to effect some admixture.

In chemicals, and such substances as undergo some preparation, the amount of adulteration is oftentimes enormous. Thus, aloes have been mixed with resin and lamp-black; the balsam of copaiba with turpentine and resin; iodine with plumbago, and the sesquisulphuret of antimony with the same substance; the mercurial ointment has contained little more than lard and colouring matter; calamine has been found to consist of the sulphate of barytes, coloured with iron; the ergot of rye has had mixed with it masses similar in appearance, made of the plaster of paris; calomel has been adulterated with the sulphate of barytes, and even corrosive sublimate has been detected in it; the essential oils have been mixed with the fixed oils, or with alcohol; acetic acid with sulphuric acid; the nitrate of silver with the nitrate of lead; and the dregs of the tincture of opium bottle have been dried and powdered, and sold as the pulverized drug. These are some of the tricks practised by the designing on the unwary; and what means have we of detecting them but an appeal to the principles of chemistry?

Thus, sulphuric acid detects the nitrate of lead in the nitrate of silver, and barytes in the carbonate of zinc; lime-water will make manifest the admixture of corrosive sublimate with calomel; the barytic salts the presence of sulphuric acid in the acetic acid; while simply melting will render evident the colouring matter in the mercurial ointment, and solution the additional resin in the aloes. Equally easy tests may be had recourse to for the exposure of other adulterations. Yet it is to chemistry we are indebted for them; and hence arises one among the many reasons why it should be taught in our medical schools.

The necessity of your becoming conversant with the medicines you employ is becoming daily more obvious; for it has been remarked that "the public are learning that there is no charm in medicine, and that drugs are to the physician what instruments are to the surgeon—indispensable tools, and nothing but tools—more likely to do mischief than good if not properly handled."

It is not that the precise form of the ball or draught is of any importance, but the *when* and *where* its active principles are



to be brought into operation—it is this which constitutes the nicety of treatment, and shews the man of education.

The multitude once thought that the physician “cured” a fever, and the surgeon “set” a broken leg; but each is now known to be only an aid to the efforts of nature; in the great majority of cases accomplishing their objects by passive or negative treatment, and employing such medicines as may be necessary, these being *few, and of the best kind*.

These remarks will particularly apply to veterinary medicine. But what shall I say of the aid of chemistry, as applied in counteracting the effects of poisons? It is true the poisoning of animals is not of so frequent occurrence, nor its consequences so awful as that of our fellow-creatures; nevertheless, from time to time, it does occur, and you should be enabled at once to exhibit an antidote, for delay is too often fatal. In the horse vomition cannot be excited, therefore you ought to be familiar with an agent that will at once arrest the effects of the poison, or, by decomposing it, render it innocuous, and prevent those torturing pangs which always accompany death by poisoning. For instance, the fatal effects of corrosive sublimate may be counteracted by the exhibition of albumen or the whites of eggs; the preparations of lead and copper, by sugar; tartar emetic, by astringent vegetables; and the antidote for arsenic is the tritoxide of iron, which decomposes it, forming an insoluble arsenite of iron; or the solution of lime may be tried, accompanied with a free use of diluents and oleaginous purgatives, in order to expel the agent. Perhaps this is more markedly seen in those cases where the death of the animal has taken place, and the agent that has been employed is unknown. It may be, that revenge has stimulated some malignant spirit to the perpetration of an act so vile. The wretch, burning with resentment for some real or imaginary offence given by his employer, has retaliated on an unoffending animal; or it may be that, in the foudness of “quackery,” so prevalent amongst grooms and stablemen, a noxious agent has been incautiously administered. In either case, it is very desirable to ascertain *what* this agent is. Here our science is of paramount importance; in fact, it cannot be done without. The effects produced upon the tissues may inform us that some poisonous substance has been given, but what that substance is chemical tests or re-agents can alone discover. Thus, the acids may be readily distinguished from each other, or it may be easily discovered whether arsenic, or corrosive sublimate, or any other potent drug, has been used. This subject will, of course, receive more of our attention hereafter.

Will chemistry afford us no assistance in tracing disease to its

causes, and pointing out the proper remedies? I will illustrate this by a reference to a few instances of recent occurrence. In one of the French veterinary periodicals appeared an account of several lambs having died on a farm, the cause of which was very obscure. A veterinary surgeon being sent for, he carefully inspected the sheep-house, and found that the walls were covered with moisture in the form of little drops, which, mixing with the earthy particles, formed crystals. He also perceived that the lambs were continually licking the walls, and he was at once led to suspect the cause of the malady. He therefore proceeded to examine the nature of the crystals, and, applying the ordinary tests, found them to be nitrate of potash. The formation of the salt may be thus explained. The air, charged with animal exhalations, was absorbed by the moisture, and became mixed with the calcareous matter of the walls, and thus the sheep-cote became a miniature nitre-bed.

The suspicions of the medical attendant were completely confirmed by an analysis of the contents of the stomachs after death; from which, by the processes of dilution, filtration, and crystallization, he obtained nitre in a crystalline form.

Now, suppose that this person had known nothing of the science of chemistry, would he have endeavoured to investigate the cause of disease in the manner which he did? Or, had chance pointed out to him the *probable* cause, would he have been enabled to demonstrate it? or, knowing it, how would he have set about counteracting the effects? By chemical analysis we ascertain what provender is best for the animals placed under our care, whether in health or disease; and possibly we have hence a clue to the method by which disease is sometimes engendered.

When a horse has been kept for a long time in a marshy district, it is no uncommon thing for him to become affected with œdema, either general or local. This is frequently preceded by a debilitated state of the system, and diuresis has been known to exist. Now, is it too much to look for the cause of this in the saline particles imbibed by the vegetables on which he has been feeding?

Again; inflammation of the kidneys is said to be frequently brought about by freely partaking of mow-burnt hay. We may explain this, I think, by a reference to the laws of chemistry. In such hay there is a great development of the saccharine principle, while, at the same time, its structure is weakened or broken down from the change which has taken place. We may say of it that the *vinous* fermentation has been set up, and all that is now required is the presence of heat and moisture, to cause it to run into the second stage of fermentation, the *acetous*. Now, suppose

this to take place in the stomach and alimentary tube—and this may be readily conceded, since the heat of the interior of the body is nearly that which, out of it, would be employed to excite this change in vegetable matter—then we shall have an acid eliminated. We have now gained one principle or constituent; and, as for the second, the vegetables themselves abound with a base for this acid, for in such as grow inland the alkali potassa is found in abundance, and more especially in those in which any decomposition has taken place. We have thus formed an *acetate of potassa* in the stomach and intestines—a soluble salt, which, being taken up by the lacteals, is conveyed to the kidneys, and excites them to increased action, and thus becomes the cause of the disease. I would ask, am I right in this conjecture? or is the disease attributable to a derangement in function, merely, of the organs of digestion, by which the blood becomes vitiated, and, the kidneys being emunctories for throwing out such matters as would prove prejudicial to the system, they are thus called into exercise, and the secretion from them necessarily becomes altered in its character?

If the latter be the right view of the matter, take the following elucidation of our subject:—

The French veterinarians ascertained that the peasants in Normandy were in the habit of curing cattle labouring under red-water (*hæmaturia*), by giving them wheat in which the putrefactive fermentation had been set up. The French school hearing of this instituted an inquiry, and, investigating the nature of the compound, ascertained that the active medicinal agent was *ammonia*: since which time, they have given as their medicinal compound the water of ammonia with success in such cases.

Take another illustration:—Most of our patients feed on vegetable matter, and frequently, from the stomach's function being deranged, much flatus is disengaged, generating the disease termed *hoven* in cattle, and *tympanitis* in the horse. Bearing in mind the changes which vegetable matter undergoes when not under the control of the vital principle, we have a clue to what here takes place. The order of fermentation has been already adverted to. We have, first, the *vinous*, secondly the *acetous*, and thirdly the *putrefactive* stage; each of which is accompanied by its peculiar phenomena. Should the first exist, we have gaseous carbonic acid in abundance given off; and if called upon in this the first and early stage of the disease, our remedy would be some agent that would combine with this acid and condense it: this we have in ammonia, and the compound formed would prove salutary by acting as a gentle stimulus to the stomach to propel forwards its contents. Un-



fortunately, however, it is too commonly the case that the veterinary surgeon is not called in until the malady has been raging too long, and another and another stage has passed on, and *putrefaction* has commenced in the vegetable mass. Were he to employ ammonia now, he would at once give proof of his want of chemical knowledge, for the gases which are disengaged in this last stage of fermentation differ much from that given off in the first. They are the compounds of hydrogen. What, then, is the remedy here? Chemistry tells us, chlorinated lime or soda.

To Mr. Youatt—to whom veterinary science owes so much—we are indebted for the introduction of this remedy. It is a proof of his love of investigation and power of reasoning. Mr. Youatt advocates the chlorinated lime for cattle in doses of from ʒij to ʒiv; the compound resulting from which in the stomach is an hydro-chlorate of lime, which quickly undergoes solution. I have thought—but it is, I confess, a matter of but little moment—whether the disease designated diabetes also receives elucidation from chemical inquiry. The peculiar principle to which urine owes its characteristic properties, namely, urea, in its elementary constitution differs but little from sugar. At any rate, remove the nitrogen, and the same elements remain, and nearly in the same proportions, so as to form sugar. Hence when, from any derangement in the digestive apparatus, nitrogen is not eliminated, the blood then not having the constituents of urea in it, this principle necessarily does not exist in the urine, but in its place a compound resembling sugar, while, from the functional alteration induced in the kidneys, an abnormal fluid is secreted in increased quantities.

The conjectures were numerous respecting the agent that contaminated the atmosphere in the neighbourhood of smelting works. That some poisonous substance was diffused, minute, perhaps, in quantity, but insidious in its influence on the organism, was indisputable. The effects produced by it on animals have been known for a very lengthened period. The specimens before you exhibit enlargements of the knees of horses, and periosteal exostosis of the bones of the legs of cows, with which was connected much constitutional disturbance.

This has lately been demonstrated to have its origin in the disengagement of a new compound from the copper ore while undergoing fusion, consisting of arsenious acid, and sulphuric acid, with a little oxide of iron and nickel.

In like manner, the air in the neighbourhood of lead works is impregnated with some compound of *that* metal; and *colica pictonum*, or lead colick, is a common consequence to animals, arising from their feeding on the herbage around, or drinking of

the water that may be near; and, knowing the cause, we have at once a clue given us to the remedy.

I think that I have now stated enough to shew the advantages resulting from a knowledge of chemistry as applicable to the detection of the cause of disease, and also the remedies that should be had recourse to. We have likewise a proof, if any were wanting, of the kind of standing which the man of scientific attainments takes above him who is a mere empiric or charlatan, and whose treatment of disease rests upon a number of musty nostrums, which may chance to do good, but are quite as likely to do harm.

There yet remains another division, in which an application of the principles of chemical science will be perceived to be fraught with the utmost importance. It is as they are made subservient to life.

In the former part of this lecture I have referred to the fact, that animals decompose the air they breathe, removing the oxygen, and giving out carbonic acid gas. What is the more immediate result of this? What the advantage to the animal frame alone considered? It is that the vitiated venous blood, rendered so by the presence of carbonic acid, and hence unfit for the purposes of life, is, during its passage through the lungs, deprived of this noxious principle, it being thrown off during expiration, and, during inspiration, oxygen is absorbed in its place, which renders the blood arterial and fit to excite the various organs of the body into action, and at the same time perfects it in its constitution.

The heat of the body is also in a great measure dependent on this change, namely, this condensation of oxygen, and conversion of it into carbonic acid; although it must be allowed that the sanguiferous system is subjected to the control of that highest principle in the animal economy—the nervous. Of course, *this* too will again come under our notice, and in a more extended manner.

The function of digestion, which is essential to the maintenance of the life of the animal, also receives elucidation by chemical inquiry. This must, however, be accepted with some restriction, for the laws which govern life—to me at least—seem to control those of chemistry and mechanics; both of which, however, are in operation in the living frame.

Thus have I brought forward a few only of the many advantages which result from the study of the science of chemistry, and yet sufficient, I hope, to convince you of its importance. Its pursuit will awaken a spirit of inquiry; a fondness of reasoning on effects, and of tracing these effects up to their causes; while its possession will fill the mind with pleasurable feelings, and instil

into it those sentiments which raise a man high in the estimation of the wise and good, and justly entitle him to the proud elevation he occupies in the scale of created beings.

It only remains for me to endeavour to remove from your minds an erroneous impression, which too generally prevails, that, for the purpose of studying chemistry, a complicated and expensive apparatus is necessary. Nothing is more delusive. It is only its *principles* you require or can hope to be in possession of, and these may be gained with an apparatus that would not cost many shillings. A few empty Florence flasks, some strips of glass, glass tubing, a piece of wire coiled in a double spiral form for a stand, a lamp made from out of an ordinary vial, a wash-hand basin and a plate or two, a perforated saucer or a common flower pot, will be all that is necessary. And I would advise every one of you to be thus furnished, and to subject to the test of experiment the statements which from time to time are made, and, if you like, to repeat the experiments you see me perform. By so doing, the study of the science on which we are about to enter will be rendered both pleasing and profitable to you, for the truths thereof will be written upon your minds as with a pen of adamant.

It may be expected that I should name the books you ought to study; but so many valuable treatises have issued from the press, that I feel some difficulty in making a selection. I would advise you to read Dr. Paris's Medical Chemistry, for it was written solely for the medical student, and it contains much important and interesting matter, although it must be confessed that it is not so recent a publication as could be wished. Brande's Manual of Chemistry stands high in my estimation for its clearness and simplicity of arrangement. Turner's and Graham's are more recent publications, and, besides these, we have Parkes's Catechism, Thomson's Outlines, Reid's Chemical Text Book, and others; so that I might almost leave you to select your own; the truth being that the only difference in most of them is in manner and not in matter. I have taken neither one nor the other as *my* text book, my remarks not admitting of it, but have collected from all. Seneca says, "the bee that sips from every flower disposes what she has gathered in her cells." I have not evinced the industry of this insect, yet I can truly say that I have been anxious to collect all the useful matter I could obtain.

In conclusion, allow me again to say, that, in your pursuits in after-life, a study of the science of chemistry—the advantages derivable from which I have endeavoured to point out—will be fraught with the highest interest. It has been well remarked, that "learning, if rightly applied, makes a young man thinking,



attentive, and industrious, confident and wary; an old man, cheerful and reserved. It is an ornament in prosperity, a refuge in adversity, and an entertainment at all times. It cheers in solitude, and, in the language of Bacon, is **POWER**."

Each age should be progressive in knowledge. From you will be expected more than from those who have gone before you. You have had not only greater privileges than they, but there is the benefit derivable from their experience; and it has been observed by Sir J. Herschel, that "there is scarcely any well-informed person, who, if he has but the will, has also the power to add something essential to the general stock of knowledge, if he will only observe regularly and methodically some particular class of facts which may most excite his attention, or which his situation may best enable him to study with effect."

There is another circumstance, which a man possessing liberal sentiments and an educated mind will not lose sight of,—the reciprocal advantage arising from communicating what he knows to others. He gives, and he receives in return. The imparting of knowledge, "like mercy, is twice blessed; it blesses him that gives and him that takes." The act may be ranked among the brightest that ennoble man; while its being withheld, evidences a sordid and a shallow mind—one whose limited powers are incapable of appreciating the consequences which as certainly follow as any effect results from an adequate cause. Such a character, enclosed in the narrow circle of himself, finds, in the end, that he is both pitied and contemned.

Now, to avoid the one and succeed in the other, you will have to labour; but you will assuredly reap the reward of your labour, if you faint not.

In your studies, you should also be circumspect in the choice of your associates: "Shew me the company a man keeps, and I will tell you the character of the man," is a saying as true as trite. It is a moral impossibility for any one to escape being influenced by his companions.

Take, as illustrative, a beautiful apologue by the Persian moralist, Saadi. It runs thus:—"A friend of mine put into my hands a piece of scented clay. I took it, and said to it, "Art thou musk or ambergris, for I am charmed with thy perfume?" It answered, "I was a despicable piece of clay; but I was for some time in the company of the rose, and the sweet quality of my companion was communicated to me, otherwise I should only have been a bit of clay, as I appear to be."

And, most earnestly would I urge you to avoid the insidious sophistry of those who endeavour to allure you into a path seemingly strewed with roses, but, in reality, beset with thorns;—

those who wish to make short work of study, and who tell you that no compensating good results from a continued application of your mind to it; that you should relax a little—would this were all!—and that “by and by” will be time enough to learn all that is required. Fatal error! A rock on which thousands have struck. Remember! I warn you against it.

If it be true that knowledge is power, its antithesis, ignorance is weakness, is no less so; and should you inconsiderately and vauntingly think that, although you have neglected these admonitions, yet you have obtained much fruit, I tell you that you have been deluded. Fair it may be to the eye, but it will prove like the apples of Sodom, which, when bitten, filled the mouth with ashes! There are few things a mind properly disciplined cannot learn; and although the study of every science presents at first many difficulties, yet, if a resolution is made to overcome them, and the mental energies are simultaneously directed to accomplish that object, they disappear, and, like an ærial vision, leave not a trace behind.

And now, lest words of mine should have fallen listlessly on the ears of any, I will close with the soul-stirring sentiments of Dr. Gregory, in his address to the students when about to retire from the Professor's chair: I am sure it cannot fail to make an impression on your minds, and such an impression as, I trust, will never be effaced.

“If,” said he, “knowledge is power, and you love power and influence—pursue it!”

“If knowledge carry in its train extended usefulness, and you owe to be extensively useful in your profession and the world—pursue it!”

“If knowledge, united with uprightness, bring esteem and confidence, and you love to be esteemed and confided in—pursue it!”

“If knowledge, rightly conducted and directed to right ends, brings you nearer to the fountain of knowledge, and thus makes you more happy, while it enlarges your capacity of conferring happiness upon others, and you love to be happy and to confer happiness—pursue it!!”

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## MR. MAYER'S ORATION.

[We sum up this most valuable collection of hints to the student with the admirable Oration of Mr. Mayer, sen., of Newcastle-under-Line, at the commencement of the meetings of the Veterinary Medical Association, in the Session 1841-42.]

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Mr. President and Gentlemen,—THE honour and duty of delivering the annual Oration to your Association have devolved upon one who wished it to have been placed in hands more able, and more competent to do ample justice to the subject than I can. However, I am not one to shrink from the path of duty, *which invariably is the path of safety*; therefore I trust you will take the will for the deed.

It is now nearly thirty years since I had the honour of first mooted the formation of the Veterinary Medical Society, the parent of your Association. The original idea of its establishment arose from my being a member of the Westminster Medical Society—a society which was then intimately connected with the Hunterian School, in Windmill-street.

I was forcible struck with the great advantages that must result to the veterinary students if an institution, conducted upon similar principles, was established in connexion with the Veterinary College. The subject was immediately mooted among a few of us, consisting of my old friend and fellow-collegian, Mr. Youatt, and Messrs. Habgood, Henley, &c., who gave its formation the warmest support. Our society, in its nascent state, stood for a short period insulated from the College. Afterwards, the worthy patron of our Association extended his fostering care over it, and, ultimately, our late lamented Professor, under whose auspices it continued, assailed by tempests within and without, until nearly the period of his death. I shall not touch upon the painful circumstances which led to the dissolution of that society; let us throw the veil of oblivion over them. Nevertheless, every one must allow that it had worked well for the advantage of the student during its period of existence.

Although, Gentlemen, the rude and withering hand of Time, as well as the equally ruthless hands of men, had given a death-blow to the parent of our Association, it is highly gratifying to me to be able to congratulate you on the vigorous offset which I behold sprung from the parent root, and which has shot into life like a phoenix emerging from the ashes of its mother.

Let this Association be fostered and cherished by you, Gentle-



men, who are now passing through your curriculum at College, and upon whose support its very existence depends. It offers great and invaluable advantages to you. It is upon its arena of debate that the youthful aspirant to fame tries his unfledged pinions, until they have become sufficiently feathered and strengthened, to waft him, at a future day, into the noble and interminable fields of science, there to cull all the moral and intellectual stores with which they every where abound. At associations like these, light and truth are elicited by debate, and they afford the fullest opportunities of sharpening the wits of youth, and enabling them to fix a proper estimation on their respective powers and capacities. It often gives an impetus to the youthful intellect which is not lost through life, and is instrumental in carrying him up and urging him forwards to the highest attainments which his profession affords ; it is, therefore, my sincere prayer that it may form an integral portion of the Royal Veterinary College through many a revolving year.

When we take a retrospective view of our profession, and compare its present position with what it was fifty years ago, we have great cause for congratulation and thankfulness on account of the progress we have made ; and although we may have moved rather slowly along, compared with some individuals in this intellectual steam-going age, yet we have preserved a forward movement, steadily and surely.

I shall not enter into the more early history of veterinary science and art : that has already been done by far more able men than me ; but I shall make some few observations upon the later portion of its history, more particularly under the auspices of Professor Coleman.

At the period when Mr. Coleman assumed the professorship at the St. Pancras College, the veterinary art was a complete chaotic mass, without science or system to direct its operations. Its practitioners were mere empirics, without education, and consequently ignorant in their calling, and not even tolerated in respectable society. In fact, at so low an ebb was the art, that it was with great difficulty the founders of the College could obtain an individual qualified to fill the chair ; and when the selection was made, the choice fell upon a foreigner.

What are we now, Gentlemen ? As a professional body, respected and respectable. If we are not so, it is our own faults : and, although we have not as yet attained our true position in society as professional men, yet the day is not far distant when we shall take our true relative place, in connexion with the Veterinary College, which will enable us to exalt its valuable interests, and secure its onward course to something like perfection.

In Professor Coleman we had a man of no ordinary intellect. He was far above mediocrity in point of talent, and every way qualified to occupy the high position to which the governors of that establishment had called him. His understanding and genius were competent to grasp every subject belonging to his profession; and the ingenuity and tact (peculiar to himself) with which he pursued a given object, will not be forgotten by those who had the pleasure and honour of sitting under his instruction. He possessed a generous and a warm heart towards all his pupils, uniformly taking an interest in their future welfare. The energies of his mind were more exclusively devoted to every thing bearing upon the horse; and no wonder, for the College, constructed as it was and is, can only be adapted for the reception of that animal. Consequently it alone, of all our domesticated animals, has absorbed the whole attention, until very lately, of the professors of that establishment.

In Mr. Coleman's early career, and even until within a very few years, the veterinary art, so far as regards its application to cattle, sheep, swine, dogs, &c., was in the lowest state of barbarism and degradation. We cannot, therefore, feel surprised that Professor Coleman, beset by so many opposing obstacles in that particular branch of our art, and having arrived at an advanced period of life, could not fling himself into its pursuit: nor was it reasonable to expect it from him. It is only the other day that Youatt, in his *Treatise on Cattle, Sheep, &c.*, has given a scientific form to the veterinary art, as applied to those animals. He it is to whom belongs the honour of having erected a beautiful and well-arranged structure out of the crudest and most heterogeneous materials, and which will be far more durable to his fame than monuments of brass or marble.

You will kindly pardon this digression; but I hope, after what I have stated, we shall no longer hear Mr. Coleman reflected upon for not accomplishing impossibilities. I shall ever esteem the man, and revere his memory; and although I feel myself incapable to do full justice to his merits, yet posterity will.

Surrounded and connected as he was by and with all the galaxy of scientific and medical talent of his day—inferior to none in the world—he was enabled, by their generosity and kindness in admitting the veterinary students to their respective lectures; by their devoting themselves to the examination of the students as to their qualification to practise; by their condescension in attaching their signatures to our diplomas, and thus, as it were, casting over us a portion of their mantles, which gave us a weight and importance in the eyes of the world that told well for the profession—but these valuable and adventitious aids, so useful in

the infantile state of our profession, must soon yield to other arrangements more efficiently adapted to the present demands of our art and the times we live in—by these means he was enabled, I say, to achieve that advancement of the veterinary science and art to its present perfection, which never could have been accomplished in the same space of time without their co-operation.

Gentlemen, we owe the medical men of our day, and those who have gone before them, a debt of gratitude we can never repay ; but such high and honourable-minded men will consider themselves amply compensated, not only by the consciousness of having done their duty in their day and generation, but also by the gratification they must experience in beholding the honourable and important station we have been enabled to take in the field of science and art by their noble and disinterested conduct towards us.

In this stage of our proceedings, I should be wanting in every spark of right feeling if I did not draw your attention to the loss which we and the medical world have experienced, since your last anniversary, in the death of Sir Astley Cooper—the bosom friend of our late Professor, and the warmest, most disinterested, and honest friend the veterinary profession ever had, or ever will have. In no one was there more a happy combination of the *suaviter in modo et fortiter in re*, either as a private gentleman or a professional man.

Although much has been effected in the advancement of our art by these two important characters, and also by our modern authors, Blaine, Percivall, Youatt, White, Turner, Bracy Clark, &c. &c., and, though last not least, by our worthy secretary, Mr. Morton—for unless tools are placed in our hands, and their respective uses pointed out to us, we can make but poor progress in the cure of disease—yet there is a wide and extensive field, where genius, combined with education, industry, and perseverance, may reap innumerable honours and fame. We have as yet, Gentlemen, only attained a station half way up to our summit level ; nor must we rest satisfied until we have arrived abreast with our medical and surgical brethren, both in a civil and professional point of view.

I trust, ere long, we shall rejoice to see every branch of science that ought to come within the scope of a veterinary surgeon's education forming a distinct chair or lectureship within the walls of the Veterinary College. The advantages of such an arrangement would be untold, both in a moral point of view as well as a professional one. The students would then be more immediately under the eyes of the principal professor, and their time would be fully and usefully occupied by a diligent course of attendance



upon the respective lectures ; and if it was not so, they could be refused their certificates of attendance, without which they should not be allowed an examination. I had hoped that, by this time, my colleagues and self, who have laboured for the obtainment of a charter, might have been enabled to have congratulated the profession upon possessing a chartered college of examination, in order that we might occupy the same relative situation towards the veterinary art, as the College of Surgeons and the Apothecaries' Company do towards the medical schools of the United Kingdom. This is the only true position the profession can occupy as a chartered body, with full and unfettered advantage to itself and to the Royal Veterinary College. This would form a new era in our history, and would tend to give a greater impetus to the onward course of veterinary science than any event that has occurred since the first formation of the Veterinary College. Did I not feel assured that my friends Mr. Sewell and Mr. Spooner would give me credit for not meaning any disrespect towards them in touching upon this tender ground, but that they would attribute it to my zeal for the welfare of the art, I should not have done it.

It is on you, Gentlemen, who form the rising generation, and are now, as students, passing through your curriculum at the Veterinary College, that the important duty will devolve of carrying out and maturing the plans of those who have gone before you, and whose zeal and perseverance have brought us thus far. Let the importance, therefore, of the objects stimulate you to lay a good foundation, in an educational point of view, in order to qualify you to act your part in the great drama of life with credit and dignity to yourselves, and permanent good to the profession you follow.

For the attainment of knowledge, as a celebrated man used to advise his pupils—"Let your search after truth be eager and constant. Be wary in admitting propositions to be facts before you have submitted them to the strictest examination. If, after this, you believe them to be true, never disregard or forget any one of them, however unimportant it may at the time appear. Should you perceive truths to be important, make them motives of action—let them serve as springs to your conduct.

"Many persons acknowledge truth with apathy ; they assent to it, but it produces no farther effect on their minds. Truths, however, are of importance in proportion as they admit of inferences which ought to have an influence on our conduct ; and if we neglect to draw those inferences, or to act in conformity to them, we fail in essential duties."

"That which most dignifies man, is the cultivation of those intellectual faculties which distinguish him from the brute cre-

ation. We should indeed, seek truth, feel its importance, and act as the dictates of reason direct."

Obtain clear and definite ideas upon every thing that is presented to your minds, by which means you may grasp and grapple with the most abstruse subjects in nature. Never consider any thing too trifling to be beneath your notice. Follow it out in all its bearings: for it was the simple fact of an apple falling from a tree which led the great Sir Isaac Newton to demonstrate satisfactorily that it was the principle of gravitation which preserved this globe of earth, and all the innumerable worlds by which it is surrounded, not only in perpetual motion, but also poised and preserved them in their respective orbits, each pursuing its destined course till time shall be no more—and all in that beautiful and harmonious order which excites our deep-felt wonder, and our awe and veneration for the great and beneficent Author of all.

A young man, destined for our profession in the present day, should have not only a liberal English education, but a classical one too. At all events, the usual education of the veterinary pupil for too many years past will no longer satisfy the expectation of the public, or establish his own reputation and success.

He should also be made acquainted with the elements of mathematics. Let him cultivate sound, religious, and virtuous principles; let those principles be his pole-star through life, in the hour of prosperity as well as in adversity. Cultivate high, independent, and honourable principles, and the generous and best feelings of man will respond accordingly. They will secure the esteem and respect of all around you; and, when your sun is setting in the horizon of this vale of mingled pleasure and sorrow, its parting beams will shed a radiant lustre around those you leave most dear to you.

The independence which a young man should also pursue is the ability of honestly providing for his pecuniary wants, of ceasing to be a burthen to his friends, and of obtaining by his own exertions a respectable rank in society. This sort of independence necessarily includes industry, fidelity, attention, obliging manners, and all the modest virtues in its train.

Too many, I fear, pursue an opposite course when they are first launched out into life. They consider it indispensably necessary to curry a connexion by stooping to habits beneath a gentleman and a man of business. Never was an idea more erroneous. It defeats its own end: and actually the very parties who have benefitted by your indiscretion (if I may use such a term in this instance) are the first to treat you with contempt so soon as you have lost your *caste* and grade in society.

I am sure you will not consider me out of place if I recommend

five little works to the veterinary students, which, if they will read, mark, learn, and inwardly digest, will make them better men, both in a moral and professional point of view ; viz., Locke's *Conduct of the Understanding*, Watts on the *Improvement of the Mind*, Watts's *Logic*, Bacon's *Essays*, and, though last not least, Mason on *Self-Knowledge* : for you may depend upon it, that for a man to know himself intimately is a very difficult as well as not a very palatable piece of business ; and until he has acquired that knowledge, and formed a proper estimate of his own character, he cannot become a great man either in or out of his profession.

In pursuing your medical education, let it be based upon a thorough knowledge of anatomy and physiology ; for unless this foundation is laid deep and solid, depend upon it the superstructure will be a very tottering one. You would consider that man a great fool who took his watch to be repaired to any one but to a watchmaker, a man thoroughly conversant with its structure and internal arrangements. Just so is the individual who takes his horse to one totally ignorant of its mechanism, for that animal is a very complicated piece of machinery, liable to frequent derangement ; and consequently, if his movements must be properly regulated, it must be done by the scientific man, who alone is well skilled in anatomical and physiological knowledge. In your worthy President you have an instructor well skilled in his department ; and if you will only do your duty towards him as well as he will towards you, the results will be equally as advantageous to yourselves as to the public. In my day we possessed no such advantages as you enjoy. We were compelled to fag hard, with Blaine for our text-book, in order to obtain even a moderate acquaintance with these branches of our education : therefore make the best use of them, or you may at a future period often sigh for the present opportunities of acquiring knowledge, but in vain. I would particularly recommend you to cultivate a constant habit of registering all important cases. Never omit making post-mortem examinations ; for by pursuing this plan assiduously, you will obtain correct pathological ideas, and possess a standing of superiority in your professional character which no other conduct can give.

Pursue systematically a regular course of reading, so as to make yourselves well acquainted with the respective merits of every veterinary author, and likewise with every other branch of knowledge bearing upon veterinary medicine and surgery. By reading well up to the times, you keep yourselves abreast with, if not ahead of, the progress of knowledge ; thereby rendering your-



selves competent to preserve your proper station in society, with great advantage to yourselves and those who employ you.

Do not, however, suppose that, in thus recommending you to store up the knowledge, opinions, and ideas of others, I wish you to adopt them without examination: certainly not. You must pass them into the circulation of your own thoughts, test them by your own experience, and apply them to practical use. If you suffer the knowledge you have obtained from your books to rest upon the memory as it came there, it might as well, for any practical purpose, have remained upon your shelves, to be taken down as occasion might demand. The food we take into the stomach will contribute nothing to our nourishment, health, and strength, unless it is digested, and, passing into the different regions of the body, becomes a part of ourselves. Without this process and distribution it is rather a weight upon the organs of life, an oppression upon the elasticity of the system. So it is with learning remaining on the memory in the crude masses in which it was received. Reflection is the digestive power of the mind. By this we prove what we have read and heard—we separate it into various parts—we modify conclusions that are too strong—we narrow principles that are too universal, and extend to new objects and relations those that are too much restricted. We select and retain what is good and valuable, and reject the unsound and unprofitable. We thus extract all its nutritious juices from that which we have learned from others, and we strengthen and enrich the soil of our own intellect, making it capable, in return, of producing fruit and food for others.

Another evil consequence of depending wholly on authority for our opinions on all subjects, and shrinking from the use of our own understanding, is, that we remain in a mental bondage, a helpless childhood all our lives, becoming, indeed, more timid and servile than children. Therefore, reflect and meditate upon all you read and see; for although reading may make a plausible man, it is reflection and meditation that create the substantial riches of the mind, and constitute a well-read and a wise man.

Think not, when you have obtained your diploma, that the race is won. The most difficult part of your career in life is only commencing. A diploma is only an entry—if I may use a sporting phrase—into the racing calendar of life. You form one among the list of competitors for the prize to be won. You have, indeed, rasping work often before you—a great deal to try the metal you are made of; but by industrious, sober habits, great vigilance and much patience and perseverance, all obstacles will gradually vanish before you, and success will crown your efforts. Perhaps

your hoary head, in the decline of life, may even become encircled by the public with a chaplet of laurel.

I have now drawn my Oration to a close: you will perceive that it has had for its object more particularly the interest of the students who form the majority of your Veterinary Medical Association. That it may attain its aim, is the devout wish of one who will yield to none in his zeal for your advancement and future welfare.

Allow me the gratification, before I take my seat, to announce to you that Mr. Thomas Turner has kindly undertaken to deliver the Oration at your next annual meeting for 1842. I feel assured that you will agree with me that no one is more competent to do this ample justice; and depend upon it that he will carry weight for age and qualification.

The prize subjects for the ensuing year are, for practitioners,

“BLOOD-LETTING IN THE HORSE, when demanded, and its consequences.”

For pupils,

“DIURETIC AGENTS IN THE HORSE, their *modus operandi*, and effects upon the system.”

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## THE VENEREAL DISEASE OF HORSES, AND ITS CONNEXION WITH GLANDERS AND FARCY.

By ZETA.

THERE has been recently published in Germany a very important memoir on the above subject\*, a disease which, we believe, has not been found to exist in this country—at least it has not been hitherto described by veterinary writers. As there is said to be intimate relationship between this disease and glanders, and as the affection itself is highly dangerous, I shall as briefly as possible state the opinion maintained of its leading characteristics. The English veterinarian must form his own opinion of them.

This malady occurs principally among stallions and brood mares, and is developed under peculiar miasmatic and individual relations, and is then communicated by contagion alone in the

\* Die Venerische Krankheit der Pferde, &c.—Breslau.

act of copulation. It is characterized by marked and continued depression of the nervous power—by mucous discharge, especially from the parts of generation—by disturbed functions of the cutaneous, lymphatic, and glandular systems—by the consequent formation of ulcers upon and of knots in and under the skin—by paralysis of the hinder extremities—and, finally, by fatal emaciation.

Although doubtless of prior occurrence, it does not appear to have been distinctly recognized before the year 1818; but between this period and 1821, a disease with the abovementioned symptoms prevailed in Syria. A similar affection appeared in Bohemia in 1826-7, and continued for several years; and the same disease is said to have visited West Prussia, Lithuania, Hanover, and part of Switzerland.

In the spring of 1833, two isolated cases came to the knowledge of the official authorities in the village of Steindorf, on the borders of Silesia. Three years subsequent to this period, during an epidemic of catarrhal rheumatism, the strangles being also prevalent, the disease occurred and spread very much in the department of Neisser. It appeared again in March 1838, but was checked by the observance of appropriate regulations.

The morbid appearances in the genital organs usually shewed themselves in a few weeks—sometimes, however, in a few days after the act of copulation: but a peculiar depression, resembling narcotism, might be observed within the first three days. The early or premonitory signs, however, have been generally confounded with the effects of the natural excitement of the genitals at these times.

In severe cases, there is swelling of the parts of generation, without pain or sensibility on pressure, heat or increase of temperature, but attended with a sense of coldness to the touch. This swelling commences at the entrance to the vagina, from which it spreads around and to the perineum and udder. Upon close examination, the mucous membrane of the vagina is found to be relaxed, slightly reddened, moderately swollen, and covered with a viscid mucus resembling the white of an egg, which in the advanced stage becomes ropy and of a reddish yellow colour.

In consequence of the absorption of the vitiated secretion, there appear, sparingly scattered over the external surface of the labia, small phylactenæ, which soon pass into chapped ulcerations. The scabs are superficial and circular, and remain distinct like the crusts of small-pox. They spread from the genital organs to the rest of the body, chiefly to the head and throat, but rarely to the extremities. After these heal, innumerable milk-



white spots deprived of hair are left behind, so that the horse looks speckled.

Accompanying these symptoms there is great depression of the nervous energy. The senses become blunted ; the expression of the animal is dull and heavy ; motion of any kind is effected with difficulty ; and there is great loss of power in the hinder extremities. The author considers that this state of debility depends purely on an impression made on the nervous system.

After the ulceration has continued for some time, knots or tubercles of various dimensions are developed beneath the skin. Some of these are as large as a dollar. They are smooth, firm, and elastic ; circular in form, and sharp-edged. There is neither pain on pressure, nor any remarkable redness of the parts or heat. They first make their appearance on the haunches, then on the head and throat ; afterwards upon the shoulders, breast, and other parts of the body, but have never yet been observed on the extremities.

When they open on the surface, which very rarely occurs, a sero-lymphatic matter exudes. After a time this discharge dries up, and the tubercles disappear.

In proportion to the duration and number of the tubercles beneath the skin, and the ulcers on the surface, is the liability of the large glands to take part in the disease. Swelling of these glands takes place, and in very many instances a chronic glandular affection is the consequence, which not unfrequently terminates in glanders ; and when the formation of the tubercles has prevailed throughout the course of the disease, and the morbid secretion has been checked, it ends in farcy, rapidly followed by a fatal result.

Glanders and farcy are not invariably the diseases in which this affection terminates. Sometimes a general relaxation of the system ensues. Shiverings, never of the whole body, but occupying individual layers of muscles only, and in single muscles resembling the catchings of galvanism, may be observed. These partial rigors are accompanied by extreme weakness of the posterior limbs.

In some singular instances the loss of power affects one ear or the lower part of it ; in others, the extreme portion only of these organs is affected, so that the tip of the ear, for instance, is bent at an acute angle, as if the cartilage was broken.

Finally, the paralytic affection varies as much in the form which it assumes as in the degree, the situation, and the symptoms accompanying it.

In a few weeks the animal sinks under these symptoms ; the ulcers and tubercles, in some instances, terminating before death

in desquamation of the skin ; in others, gradually disappearing, The continuance of the affection is from four to nine months. during the whole of which period the pulse continues slow and sluggish and almost without change to the end.

The foregoing account refers to the disease as it occurs in the mare. In the stallion it differs, inasmuch as the constitutional symptoms appear before the local affection of the genitals—emaciation, weakness of the loins and hinder extremities, paralysis, &c. preceding the occurrence of swelling of the parts. The first symptoms are swelling of the prepuce, and the appearance of small miliary vesicles on the organ itself, which give rise to excoriations and the formation of crusts, &c., as before described in the mare.

This peculiar disease would appear to be frequently of spontaneous origin, both in the horse and in the mare, and at the same time appears to be communicable from the one to the other. This communication, however, seems to take place rather as a consequence of the local excitement depending on the generative act, under a peculiar epidemic constitution, predisposing to the development of glandular disease, than as the result of the absorption of a specific poison. The appearances after death throw little light on the nature of the disease. The preceding details are sufficient to characterize this severe and dangerous malady, should it be found to exist in the country ; and the brief sketch may be of use in directing to the subject the attention of those having the care of studs.

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We are not aware of any British surgeon who has described this dreadful disease as generated, or communicated, or received by the quadruped ; nor have any of our veterinary writers or practitioners recorded a single instance of it. No one, however, has been long in practice without witnessing from the genital parts of the horse, the mare, and the dog, a purulent discharge, sometimes communicable by coition, particularly from the glands, or urethra, or labia pudendi. The mare has also been infected by the discharge from an ulcer on the penis of the horse.—[ED.]

M. Lautour has given a somewhat curious account of this\*.

“ In April 1830 a mare was brought to me with a discharge of a yellow colour from the vulva. The mucous membrane of the vagina was of a deeper colour than natural—the right teat was the seat of a very tender phlegmonous enlargement, extending to

\* Rec. de Med. Vet., 1834, p. 113.

the groin and the thigh on the same side. The appetite was good, and the digestive function well performed. This discharge had first appeared about eight or ten days before. The attention of the owner was fixed on the swelling of the teat, which produced a degree of lameness, sufficiently great to prevent the animal from discharging her usual duty.

“I took six pounds of blood from the jugular vein—scarified the teat, and applied emollient lotions to it—made some injections of slightly acidulated water into the vagina—and put her on a mash diet. A radical cure was effected in about fifteen days. I thought that I was treating a case of simple inflammation, and therefore adopted this soothing plan.

“During the treatment of this mare, I was sent for to attend another, that laboured under a similar attack. I adopted the same mode of treatment, and with the same success.

“At the commencement of May I had other cases—with this difference, that the complications were more serious. I confess that I was astonished to have so many patients at the same time, each exhibiting the same symptoms; and my surprise was increased when I reflected that I had never seen a similar epizootic or enzootic, or found an account of such an one in the works of any veterinary surgeon.

“Being informed that all these mares had been covered by the same horse, I endeavoured to ascertain the state in which this horse was. I was unable, however, to accomplish this, for his owner had clandestinely conveyed him away, and no one could tell me where he had been taken. This sudden disappearance, however, was of little consequence, for every day new patients were brought to me in precisely the same condition. There was an abnormal discharge from the orifice of the vulva of a yellow or white colour, varying much in relation to its quantity in different individuals, and least abundant in those that were out of condition and weakly. There were few ulcerations in the early part of the disease; but when the malady had made some progress, chancres were sure to exist, either on the inside of the thighs, or round the vulva, or on the mucous membrane of the vagina. Sometimes a greater or smaller number were found on all these parts.

“I had always occasion to remark the sympathetic inflammation of the mammæ, and which generally terminated in suppuration, especially when venesection had not been had recourse to. Sometimes the wound became ulcerated after the pus had escaped, and always after parturition.

“About a dozen of these mares became affected with chronic glanders. If I had only found two or three with this complication



of disease, I should scarcely have attributed the glanders to the previous ulceration ; but the number became so considerable, that I could not avoid presuming that the original source of the glanders was inflammation of the genital organs.

“As to those that had been early covered, the malady readily yielded to the employment of general bleeding, scarifications of the udder, and the injection of emollient and acidulated fluids into the vagina : but as to those to whom I was called at a later period, it was more difficult to effect a cure, and some were not in a sound state until six weeks or two months had passed : I therefore ceased to employ any general debilitants on them, but I rendered the treatment of the case more active by injections of gentian and alum more or less concentrated. The ulceration resulting from the opening of the abscesses on the *mammæ* were covered with powdered bark.

“In some cases in which, after six weeks or two months my labours were not crowned with success, the proprietors, annoyed at the slowness with which the cases proceeded, placed their horses under the care of ignorant empirics, who violently purged them, and in a little time induced marasmus and death. That is not at all to be wondered at, if we consider in how many cases the texture of the digestive passages of these animals had considerably suffered in consequence of the disease, and that, consequently, the abuse of purgatives could only hasten the fatal termination of the affair.

“The greater part of the mares that were not submitted to any treatment got well spontaneously, after exhibiting the symptoms that have been described, during a space of six or eight months, or even a year. It is proper to remark, with respect to the animals that were not bled, that there were febrile reactions more or less intense which exhibited themselves towards the third or fourth month, or after this, and that the inflammations on the *mammæ* were almost interminable—no sooner one cicatrising, than two or three others broke out around.

“All of those that were affected with mange having been destroyed, the examination after death presented the following lesions : the external parts of generation infiltrated, and presenting traces of acute inflammation—inflammation of the integument that covered the inside of the thighs—the mucous membrane of the vagina thickened, red, or livid, and closely set with ulcerations more or less deep—the neck of the uterus ordinarily scirrhus. The ovaries always presented great intensity of inflammation and degeneracy of structure—their tissue had become lardaceous, or was filled with purulent matter. The peritoneum presented traces of inflammation in the pelvic region. The mucous membrane of

the nasal passages was chancered, tumefied, and covered with vegetations: in a word, chronic mange was established, and announced its existence during the life of the animal by all the symptoms that characterize it.

"I cannot permit myself to conclude without avowing that I do trace a strong analogy between this affection and the venereal disease in the human being."—So far M. Latour.

Hurtrel D'Arboval is of a different opinion. "We cannot deny," says he, "that inflammation of the mucous membrane of the canal of the ureter may arise in animals in consequence of the same causes that determine that of the bladder and of other parts—that the inflammation of the lining membrane of the vagina, observed among some of our domesticated animals, arises from parturition and other mechanical causes—that many peculiar morbid phenomena may be observed in the dog, as purulent discharge from the generative organs—ulcers called chancrous phymosis and paraphymosis, and swelling and other diseases of the scrotum: but these morbid phenomena have never produced in brutes the consequences which they produce in the human being—they have never been legitimately proved to be the cause or the consequence of syphilis. In the bull and the stallion an involuntary flow of serum has been considered as syphilitic, but erroneously so. The warts on the penis of the horse—the swellings of the scrotum—its tenderness, and that of the epididymis—the fungous productions that are occasionally perceived—the discharges from the urethra—the chancrous ulceration of various parts of the genital organs—the aphthæ which, under the erroneous name of chancrous ulcers, are found in the mouth,—none of these circumstances are sufficient to warrant the application of the term syphilis. They are local accidents, and they are nothing more: we find a great many of them even on castrated horses. Dr. Jourdan gives a curious account of a stallion to which an improper quantity of cantharides had been administered. This produced inflammation of the gland, followed by ulcerations, which were communicated to certain mares with which he had connexion. Would any one conclude that a syphilitic agency was at work here? A discharge of purulent matter supervenes. It was produced by the acrimony of the fluid yielded by the empoisoned surface of the generative organs. There have been several instances of this. Without having recourse to an imaginary virulent principle, nothing is more frequent than the transmission of disease by the contact of the mucous membrane of a sound individual with the mucous membrane of a diseased person.

"That which we have said of the mucous membranes generally

applies particularly to the genito-urinary organs of animals. When labouring under a certain degree of inflammation, these furnish a secretion which, applied to another sound mucous surface, has the property of exciting an irritation, at the close of which is developed inflammation more or less intense, following the energy with which the morbid fluid acts, or, rather, the susceptibility of the tissue on which it has been received : but it remains yet to be proved that this morbid product is of a syphilitic character.

“In the course of a long practice we have not failed to meet with cases that many would have mistaken for syphilis. We have particularly observed and treated, in the genital organs of the entire horse, irritations, inflammations, paraphymosis, discharges, ulcerations; phlegmonous affections that have been exceedingly obstinate; enlargements of the inguinal lymphatic glands; enlargements of the testicles—all this we have seen, but we had never the slightest suspicion that there was any thing syphilitic in the matter. We never had recourse to anti-venereal treatment, but were content with antiphlogistic measures, modified by the peculiar circumstances which the case indicated, and we never have had occasion to repent of the course we pursued.

“The affection in the horse that has been mistaken for syphilis has, at its beginning, been irritation or inflammation about the glans of the penis, and the membrane that covers it; then, extending along the penis, the inflammation has attacked the membrane forming the inner lining of the sheath. When this irritation is not accompanied by any morbid secretion, the parts become inflamed, red, and painful. When a morbid exudation accompanies this, the natural moisture of the parts is increased, is more consistent, has a strong, penetrating, and sometimes foetid smell—a whitish serosity is secreted, and mingles with it; and in this case, the epidermis which covers the penis becomes separated in the form of little films or plates. The disease continuing, considerable swelling takes place, and phymosis or paraphymosis ensues. If the inflammation is more intense in some places than in others, little circumscribed red spots begin to appear, small vesicles form and break, and a small ulcer is established, improperly called a chancre.

“The inflammation is not always confined to the external surface which is first affected. It extends sometimes to the membrane of the urethra, and causes certain morbid secretions from it, more or less abundant. These constitute the discharge which is sometimes so abundant and so obstinate, and also the ulceration and swelling sometimes found. There is nothing more extraordinary in this than in other cases of phlegmasia. The time when this



commences or ceases is altogether uncertain. It is at first the natural discharge from the mucous surface of the urethra, and increasing in quantity, and assuming a puriform character in proportion as the inflammation is aggravated.

“What has been already said will enable us to form a correct idea of this totally local malady. I will only add, that there is the habitual neglect of cleanliness in these organs, and which no one seems at all to think or to care about—the various accidents to which they are exposed—the foreign bodies that sometimes insinuate themselves into the sheath—the long continuance there of the sebaceous matter and the concretions, and which press upon and excoriate both the penis and the sheath—the too great frequency of coition—contraction of some part of the sheath; all these are circumstances which will perfectly account for any inflammation that may be set up. These different agents will also produce different degrees of inflammation and disease. It is so with regard to the urinary organs, and the cause is seldom misunderstood.

“The treatment should consist of mild tonics when there is no serous exudation, and refrigerants in a contrary state of the parts, assisted by gruel in which a small portion of nitre has been dissolved, and the general feeding more or less restricted according to circumstances. To these we generally add narcotics in decoction, or in aqueous solution, when there are excoriations or sores, in order to allay the extreme irritability, and to hasten the cure. These simple means are often sufficient to obtain the healing of the ulcers, wrongly said to be chancreous. It is rarely that we are compelled to have recourse on account of them to any corroding lotion, or to have them touched with any caustic substance.

“When the inflammation of the part is very intense, accompanied by considerable swelling of the penis, recourse must be had to the applications generally resorted to for phymosis and paraphymosis. Prudence will suggest that the stallion shall not be used until the genital organs are perfectly free from disease.”

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[This is a very important subject, and we should be glad to obtain the opinions of those who have had practical knowledge of it.]

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## AN OCCASIONAL CAUSE OF DEATH IN SHEEP.

*By Mr. J. P. CHEETHAM.*

[THIS communication, from our deceased friend Mr. Cheetham, has been mislaid. It was one of the last letters that we received from him.—Y.]

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Being aware that you value information similar to the following, I accordingly trouble you with it.—J. P. C.

“ Sydney Gazette, Tuesday.

“ IN consequence of the ruinous effects of a very prevalent complaint among sheep, his Excellency has appointed commissioners to investigate thoroughly the nature of the disease, with a view to its cure and prevention in future. We have lately had a conversation with an extensive sheep-holder on the subject, and as it is one of a most important nature, I will endeavour to give, for the benefit of the community, the substance of his experience—at least, in some diseases which were until then unknown, and whose immediate causes are still little understood.

“ The first, then, to which we beg to call the attention of your readers, is the water to which the sheep have general access. The water-holes are usually surrounded with trees, which, during a continued drought, shed their leaves into the water. Now, while any large body of water remains in the holes, the effects arising from the infusion will not be perceptible on the animal; but when, during the excessive heats of summer, the quantity becomes reduced, its powerful astringent effects will be discovered in the disease and consequent death of many of the flock. This latter circumstance more frequently occurs than in cases of scab or rot; because, in the latter, the nature of the complaint is known immediately, and proper remedies can be applied in the first stage of the disorder; whereas, in the former, it is unknown until after the death (and then only discoverable by a thorough anatomical process), while a remedy or cure is entirely out of the question.

“ The only chance which suggests itself to save a flock thus attacked is instant removal to a situation where water may be obtained without containing that strong principle of *tannin* which all our trees possess in a greater or less degree.

“ There is another disease, not unlike the above, to which sheep are liable, arising from a somewhat similar cause, and to

which the same remedy *only* can be effectually applied. This arises from drinking water impregnated with alum. The gentleman to whom I have formerly alluded informed me that, on one occasion, a very large proportion of a flock died off, a circumstance for which he could in nowise account. There was no external sign of illness, yet they died.

“ This induced him to subject the carcass of one of them to a regular anatomical process, which pointed out the stomach as the seat of the disease ; and, from other appearances, he came to the conclusion that the evil was caused by the water. He accordingly tested the water from holes on the run, and discovered one strongly impregnated with alum. The mystery was elucidated, the flock was removed, and the mortality ceased. We may, however, expect more information upon this subject when a proper investigation shall have taken place.”

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## A CASE OF PUNCTURE OF THE EYE IN A HORSE.

*By the late Mr. E. PRICE, of Cork.*

[The following little sketch from the pen of our deceased friend had been mislaid.]

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ALTHOUGH a constant reader of your useful and instructive Journal, my contributions have, hitherto, been few and far between. In the first place, I am quite unused to writing for the public eye ; and persons, like myself, in active practice, have little time to commit their ideas to paper in a manner worthy of the subject. It has often been matter of regret and surprise to me that there is such a paucity of contributions from practitioners of long standing, and from the army veterinary surgeons, the latter of whom must have such rare opportunities for experimental practice, and time wherewithal to communicate the same ; while the latter must be in possession of practical facts that would edify many a junior, and even senior practitioner.

A deep feeling of this must be pleaded as my excuse for now intruding upon you. Should you approve of my present contribution, I have other subjects in *petto*, as the cautery, the seton, and the efficacy of the sulphate of copper. We should not, I think, act upon the principle to get what we can, and keep what we get, but each should communicate the result of his own experience and observation and practice. It is this feeling which induces me to forward the present communication.



(Poor fellow! In less than a fortnight he was carried to his long home!!)

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A very singular case occurred a short time ago in my neighbourhood. Does it point out a new mode of treatment of that intractable and almost incurable disease ophthalmia? In the present case, the cure was a radical one.

A celebrated M.D., a great horse-amateur, and fond, withal, of a little bit of practice of his own, when opportunity offered, had a mare that had frequent and severe attacks of ophthalmia, but more particularly in the left eye.

On the last attack, and when the inflammation was at the highest, he determined to scarify the conjunctiva. He was everting the lids for that purpose, when, from a sudden motion of the head, the lancet passed through the conjunctiva, cornea and all, the whole of the aqueous humour escaped, and the eye was in a partially collapsed state.

The doctor considered that he had settled the business; however, to his surprise and gratification, at the expiration of three days, the eye had assumed a more healthy appearance, and in a few days more the inflammation had entirely subsided, and it has not returned.

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## A CASE OF DROPPING AFTER CALVING SUCCESSFULLY TREATED.

*By Mr. J. A. HUGHES, Corndale, Shropshire.*

ON the 18th of March in the present year, I attended a cow, belonging to Mr. Cornwall, of Dibbury Hall. She had calved three days before.

The cowherd informed me that as he was taking her into the cowhouse, the night before, she slipped down, and could not rise again. The pulse was 80, hard and full—the heart could easily be felt, and beat very strongly—and the bowels were a little constipated.

I bled her—gave a cathartic drink, and applied a strong embrocation along the spine.

19th.—The purgative has acted well, but the loss of voluntary power is the same. The purgative was continued, but with some anodyne medicine, and a charge was applied.

22d.—No better, but she has tried to get up, and dragged herself round the cow-house. She was again bled, and the extract of belladonna in doses of two drachms, with nitrate of potash, ordered to be given daily.

24th.—She is up, but staggers as she endeavours to move

about. The pulse 60, but not so strong, and the action of the heart much lower.

27th.—Continuing to improve. Continue medicine.

30th.—Convalescent.

With your permission, I will send you a case or two of the poisoning of cattle by meadow saffron.

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[We shall very thankfully avail ourselves of Mr. Hughes's kind offer.—Y.]

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## ON CHARGING FOR MEDICINE AND ATTENDANCE.

*By a Correspondent.*

I BELIEVE that there was a case tried some time since, a veterinary surgeon having sent in a bill for medicines, and, at the same time, making a demand for personal attendance. A verdict, it is said, was given in favour of the veterinary surgeon. Should you be in possession of a record of this, I should feel much obliged by your furnishing me with it, for I have now a bill of mine disputed, in consequence of having charged for attendance and medicines, and the attendances being very numerous.

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[We should be thankful for information on this matter. The practice is different in different districts, and among different persons. Will some of our old stagers tell us which is, generally speaking, the most equitable plan of proceeding, as it regards the veterinary surgeon and his employer?—Y.]

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## ON INFLUENZA IN THE HORSE, AND EXCLUSIVE-NESS IN THE DIFFUSION OF KNOWLEDGE.

*By Mr. THOMAS DARBY, of Louth.*

IF you think the following worth a place in your valuable Journal, it is at your service. We have in this neighbourhood had, for the last three months, a great deal of influenza, full as much, I think, as in the year 1836; but the precursory symptoms, generally, are very different, inasmuch as in this spring a great many of them are taken with an affection of the spinal column, reeling and staggering as though the spine was actually injured, with great swelling of the legs, and extreme prostration of strength. I have had about three hundred cases, and have only lost one, and that from effusion in the chest.

My treatment has consisted in sedatives when there was much swelling of the extremities, diuretics and setons, with embroca-

tions to the spine. They had green food alternated with linseed mashes. In several I bled from the head with the best effect, when the pulse was ranging from 60 to 90, and rather strong.

I was much astonished some months ago to see the question of exclusiveness in the diffusion of veterinary knowledge in a manner approved of and recommended. Really, Sir, I felt in what an awkward dilemma it is placing you. It does, indeed, appear strange that darkness should be preferred to light; but so it is in a number of instances witnessed every day. I admit that some of the communications as regards medical treatment may have been carried out too far; but if, in our own Journal, we cannot commingle our ideas on our treatment and experience, it appears very hard, and is an abominably contracted and disgraceful system.

As regards myself, I shall be willing to communicate to the utmost of my power, while things are carried on fairly and above-board; but as for the dark, we are too much in that already.

I am, &c.

## THE VETERINARIAN, DECEMBER 1, 1841.

*Ne quid falsi dicere audeat, ne quid veri non audeat.*—CICERO.

THE Veterinary Session of 1841-2 commenced on the 8th of the last month. A domestic calamity—the loss of her who was dearest to him—prevented Professor Sewell from delivering the usual introductory Oration; but Professor Spooner occupied his chair, and gave us a scientific and beautiful lecture, with which we have been permitted to enrich the present number of THE VETERINARIAN. It was well worthy of him, and of the subjects on which he treated.

The Theatre was crowded, not only by the neighbouring veterinary surgeons, but by a class of pupils of highly respectable appearance; and who promised more, if possible, than at any previous period, to do honour to the profession which they were about to adopt. We do not exaggerate when we state that the present class consists of more than a hundred students.

In the evening came the usual oration, and dinner of the Veterinary Medical Association. Mr. Mayer, sen., of Newcastle-under-Line, the father of these periodical and pleasing and useful meetings, read an Essay more than usually interesting. It was the parent addressing his children, and few of those who were present will soon forget the kind feeling and earnest zeal which



he exhibited. We have the pleasure of presenting this document also to our readers.

To this followed the dinner, to which most of those that were present did full justice; and, after this, whether we regard the toasts proposed, or the manner in which they were responded to, a few pleasanter hours were never spent. There was not one expression of unkindly feeling from noon until the latest hour of night. May it be a pledge of the future proceedings of the profession!

We had here a better opportunity of observing the appearance and conduct of the pupils, and never could the session of instruction open more auspiciously. So may it ever be; and so will it be, if the student can be led to comprehend that he has little or nought to do with, and can imperfectly comprehend, the varying politics of the passing day, but that his duty lies, *exclusively in the Theatre, the Hospital, and the Dissecting-room.*

We have since had the pleasure of attending one of the meetings of the Committee of the Veterinary Medical Association. The plan which they have determined to adopt of confining the distribution of their Journal to those alone who belong to the Association, or are graduated members of the profession, has never been fully carried into execution by any medical or scientific journal, nor do we think that it can be.

Our friend Professor Morton, who, if it is in the power of any one to accomplish this Herculean task, will effect it, has, on our motion, been appointed Editor of this Periodical. That he may fully succeed in promoting the onward progress of our art in his own way, or in that which circumstances may force upon him, is our ardent wish. The advertisement of the Association is most readily inserted.

In the meantime our Periodical shall be conducted on the plan that it has hitherto been, and on which all other periodicals of the kind are conducted.

We may, perhaps, have occasionally developed somewhat more of the secrets of our prison-house than we ought to have done. The editors of periodicals that have reference to the human being are liable to the same charge. In the Lancet, the Medical Gazette, and other journals of a similar character, the mode of

treatment has been now and then described with an unnecessary degree of minuteness. It has been so with *THE VETERINARIAN*, and also with the Veterinary Medical Association. It shall not occur again. To this we pledge ourselves; but still we will keep nothing from the public eye that can be conducive to the advancement of veterinary science or the honour of our peculiar profession.

As to party politics, we have done with them for ever, except circumstances change to a degree that we can now scarcely anticipate. There are but three subjects—three cardinal points—on which our language, like our feelings, may be occasionally warm,—the introduction at the Veterinary College of a competent lecturer on the diseases and the management of cattle,—the examination of the veterinary pupil by veterinary men, by those alone who are competent to the task,—and the determination to procure a charter by which the interests and the honour of the profession may be effectually secured. In these three points are involved almost all that we can want or wish.

It was stated in the last number of *THE VETERINARIAN*, that it would return to its old management and price. It will contain sixty pages, we trust—generally speaking—of valuable matter, and at the cost of eighteen pence. Mr. Percivall will share the superintendence and the management, and we have many a promise of kind and effectual support. It is that alone which can again make our Periodical what it used to be—in some degree at least—worthy of the cause to which it is devoted.

We cannot close our leader without reverting to a circumstance not a little connected with our profession,—we mean, a testimonial of respect to Mr. Shaw. He was always an able and an ardent advocate of our cause; and in the two periodicals of which he is the Editor,—the *Farmer's Magazine*, and the *Mark Lane Express*,—he has rendered us much service. In the *English Agricultural Society* he is our determined friend. His late motion with regard to the state of veterinary knowledge and practice, as relates to the treatment of cattle, is a decided proof of his earnestness in our cause. We, or any of the gentlemen whose names are appended to the advertisement on our cover, will thankfully receive contributions to the accomplishment of so desirable a purpose.

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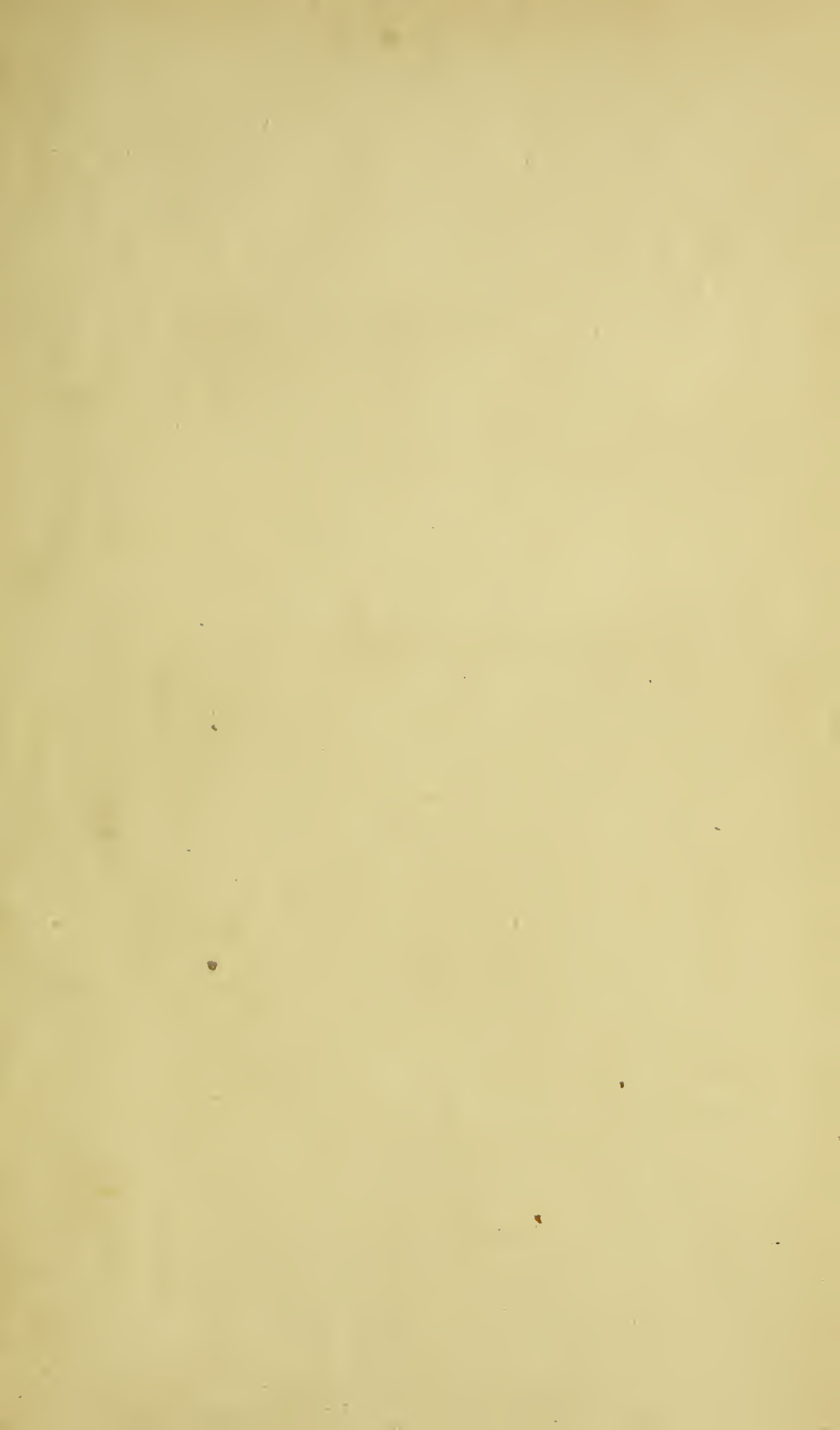












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